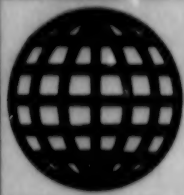


JPRS-UMA-94-005
9 February 1994



**FOREIGN
BROADCAST
INFORMATION
SERVICE**

JPRS Report

Central Eurasia

Military Affairs

Central Eurasia

Military Affairs

JPRS-UMA-94-005

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9 February 1994

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ARMED FORCES

Resolution of CIS OSTO Union

94UM0167A Moscow VOYENNYE ZNANIYA
in Russian No 9, Sep 1993 (Signed to press 29 Jul 93) p 6

[Under the "Official Department" rubric: "Resolution of the First Congress of the Union of Defense and Sports/Technical Organizations of the Independent States"]

[Text] The First Congress of the Union of the Defense and Sports/Technical Organizations of the Independent States [OSTO NG] was held on 16 June 1993. It was called at the initiative of the Council of Chairmen of OSTO of the Commonwealth of Independent States [CIS], and supported by the Office of the Presidium of the Central Council of the OSTO SG [Sovereign States] Union. It became possible after the signing this spring in Moscow of an intergovernmental agreement on joint activity by the heads of governments of Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Uzbekistan and Ukraine to promote the work of defense and sports/technical organizations of the CIS member states.

Decree of the First Congress of the Union of Defense and Sports/Technical Organizations of the Independent States

After hearing and discussing the report of the chairman of the Central Council of OSTO SG of Col-Gen Ye.I. Krylov "On the Course of Conversion of DOSAAF [Voluntary Society for Assistance to the Air Force, Army and Navy] USSR and measures to improve the coordination of activity of the defense and sports/technical organizations (societies) of the CIS member states under present-day conditions,"

- noting the change in the political situation associated with the ratification of state independence of the republics making up the former USSR and following the formation of the CIS;
- guided by the legislation and government resolutions of the independent states, and also by intergovernmental resolutions within the framework of the CIS;
- allowing for the fact that the republic organizations of DOSAAF USSR have been converted to defense and sports/technical organizations (societies) of the independent states;
- expressing the desire of the members of the defense society for further strengthening of ties of the defense organizations within the framework of a single public association in the interests of promoting the defense of our states, training specialists for the Armed Forces, industry and agriculture, and developing and publicizing technical and applied types of sports;
- proceeding from the desire to improve the coordination of the activity of the members of the Union of OSTO SG at the stage of development of new organizational forms and methods of its operation;

The first Congress of the Union of OSTO NG resolves:

1. To ratify the decree of the 7th Plenum of the Central Committee of DOSAAF USSR (October 1991) on question 1, point 2 regarding the conversion of the All-Union Voluntary Society for Assistance to the Army, Air Force and Navy into the intergovernmental Union of Social Associations: The Union of Defense and Sports/Technical Organizations (Societies) of the Sovereign States.
2. To ratify the decree of the 7th Plenum of the Central Committee of DOSAAF USSR (October 1991) on question 1, point 3 regarding the conversion of the Central Committee of DOSAAF USSR, elected by the 10th All-Union Congress of the Defense Society into the Central Council of the Union of OSTO SG.
3. To ratify the Charter of the Defense Society, adopted by the 7th Plenum of the Central Committee of DOSAAF USSR (October 1991) and recorded at the Ministry of Justice of the Russian Federation on 27 November 1991, No 421.

In addition, to introduce changes in the name of the Defense Society and its organs, putting forward the preamble of the Union Charter in the reading: "The Union of defense and sports/technical organizations (societies) of the independent (in place of sovereign) states, the Union of OSTO SG is an intergovernment (instead of inter-republic) voluntary public association of independent public organizations (societies) and individual citizens."

4. To confirm the legal succession of the defense and sports/technical organizations (societies) of the independent states in all property and other rights and obligations of the corresponding DOSAAF organizations of the former republics of the USSR.
5. To confirm the succession of the Central Council of the Union of OSTO NG in all rights and obligations of the Central Committee of DOSAAF USSR, including with respect to the resources, buildings and property belonging to it.

To ratify the decree of the Office of the Presidium of the Central Council of the Union of OSTO SG dated 22 June 1992, Protocol No 1 on the division of the balance of property of the Union of OSTO SG between the Central Council of the Union of OSTO SG and the Council of OSTO of the Russian Federation.

6. To confirm the resolution of the leaders of OSTO CIS regarding the creation of the Council of Chairmen of Defense and Sports/Technical Organizations (Societies) of the CIS member states, headed by the Chairman of the Central Council of the Union of OSTO NG for purposes of devising and ensuring coordinated actions of the defense and sports/technical organizations (societies) of the independent states, and their performance of their tasks as required by charter.

7. To approve the Statute on the Council of Chairmen of Defense and Sports/Technical Organizations (Societies) of the CIS Member States, which puts forward the goals, basic directions, working procedures and other questions of its activity.
8. To assign the Council of Chairmen of OSTO CIS:
 - To devise a new concept for the inter-government association of defense organizations of CIS and to organize its discussion within the defense organizations;
 - To synthesize the proposals made by the delegates of the congress and to devise measures to implement them.

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"Patriot", "Voyennoye Znaniya", 1993

Early Soviet Efforts on Weapons Grade Uranium

94UM0170A Moscow KRASNAYA ZVEZDA in Russian
15 Jan 94 p 6

[Article by Mikhail Rebrov: "Uranium for the Bomb"]

[Text] "Special Folder," "Top Secret"—documents with this classification have for many years been treated as the most classified. The uranium epic is one of these. In the late 40's and early 50's, it grew to be the meaning of work and of life, and if you will, even the fate of a whole generation, thousands and thousands of people who were later called *atomshchiki*. The story of the production of uranium for the atomic bomb preserves the names of talented and brave people, victors in a duel with the dangerous unknown and with uncertainty.

The events and the documents I want to talk about help us to understand the times and the task, and along with that, also the people who accomplished it. To some this may seem a boring, harsh, functional chronicle. So be it. But it is interesting and exciting, and it seems to me not just for history, but also for today. In general, everything associated with atomic weapons is reminiscent of a detective novel: Tension and dynamics of action, critical situations, suspicions, mysterious codes, puzzles, and questions.

The Starting Point

August 17, 1945. On this memorable day for the People's Commissar of Munitions, Boris Lvovich Vannikov (a Friday), Stalin summoned him and asked how much time was needed to develop an atomic bomb. Vannikov was evasive. "I think," he began, but then, glancing at the morose face of the generalissimo, he continued resolutely, "I can't say."

"Yes, you're right," Stalin nodded. "But that means we have to hurry."

The clock of fortune of many scientists, designers, and construction engineers was started that day, and began ticking.

But then, purposeful work had been started even earlier at Kurchatov's Laboratory No 2 (codename LIPAN—Laboratory of Measurement Instruments of the Academy of Sciences). Before Hiroshima and Nagasaki, however, the physicists had no serious external incentives. After a talk with Stalin, Vannikov met with Kurchatov. The talk lasted for more than three hours, and as early as September 5, 6 and 10, "closed" conferences were held at the laboratory, to which a narrow circle of scientists was invited. I.V. Kurchatov, G.N. Flerov, A.I. Alikhanov, I.K. Kikoin, P.L. Kapitsa, L.A. Artsimovich, A.F. Ioffe, and A.P. Aleksandrov reported on the "status of scientific research and practical work in the field of utilization of atomic energy." At that time the number-one task was set, to select the optimal method of "separating isotopes" to produce enriched uranium. The 37-year-old professor Kikoin was appointed project director.

Stalin made Vannikov the coordinator for development of the new field. By all appearances, there were two reasons. The first was that Stalin trusted Vannikov. The second was that the leader feared that the methods of Beria in this case might not work. For that reason, while making the head of the NKVD the "problem chief," he gave a lot of authority to Vannikov. Soon the First Main Directorate (PGU), "Atomic," was established in the *Sovnarkom* [Council of People's Commissars].

Today, when possible deadlines for development of something new are discussed, they are given in years. Then the count was in days, weeks, months. To speed up the design workups and for the transition to serial production of special equipment for the uranium project, two major defense plants were brought in: The Leningrad Kirov (formerly "Putilovskiy") Plant, which in the war produced heavy tanks and turbines, and the Gorky Machine-Building Plant, where they made artillery weapons. Of course these were monster plants, where thousands of highly qualified engineers and blue-collar workers toiled. But they did not have the slightest idea of gas-diffusion machinery, especially since at that time the machines themselves were a "complete unknown" for many physicists, as is evident from the documents.

An Imported Wind

At this point, when a painstaking selection of the way to "separate isotopes" was under way, a book by Professor G.D. Smith appeared in the U.S., "Atomic Energy for Military Purposes." It also had a second, more intriguing name: "Official Report on the Development of the Atomic Bomb Under the Supervision of the U.S. Government." Via intelligence channels the book was immediately sent to Moscow and translated. Interest in the unusual publication was even stronger because the author was an active participant in the "Manhattan Project."

The book was studied most carefully at Laboratory No 2. The suspicion arose: Might this be "disinformation?"

Before Hiroshima and Nagasaki, i.e. before August 1945, all atomic matters of the U.S. had been kept in the strictest secrecy, and now suddenly there were such revelations in September.

By then, there were no special revelations. Professor Smith was sly. The scientific and technical details were submerged in the laudatory outpourings of the author, and when the logic of his discussions demanded specifics, there would be the apologetic phrase: "For reasons of secrecy, we cannot say," etc. Nonetheless, the "grain" was found, and with it the physicists received confirmation that the path they had chosen was the right one. It was clear from the text that "serious study of the diffusion method had begun in the U.S. in mid-1941," and the fact of receipt of secret information from the British was recalled, where work had been done on gas-diffusion separation in 1941-1942. So there was something behind this, especially since the Americans used enriched uranium in their bomb.

Installation D-1

So it was gas diffusion.

On 1 December 1 1945, a government decree was signed on the development of installation D-1 (this was the designation of the gas-diffusion plant). An area close to the village of Verkh-Neyvinsk was chosen as the construction site. This was in the Northern Urals, comparatively close to the former Sverdlovsk. In the 18th century, the famous Demidov had built a small metallurgical plant here on the bank of the Neva. There was a rail spur nearby, and an electrical transmission line, and the incomplete hulk of an aviation plant had an area of fifty thousand square meters. Most importantly, the woods concealed the then almost unpopulated region from outside eyes. The decree strictly defined the deadlines: 1948 for the start of operation of installation D-1, and 1949 for operation "of the whole plant system."

The construction work was directed by General A.N. Komarovskiy (his rank was "shock defense" general). The work continued around the clock, and around 30 thousand construction workers of the MVD's *Glavpromstroy* [Main Directorate of Industrial Production] were involved in building the plant. Every day a report on the progress of affairs at the secret installation landed on Beria's desk.

The Chief Designer of the Special Design Bureau No 1 of the Kirov Plant, Nikolay Mikhaylovich Sinev, recalls: "Today the technology for producing highly enriched uranium has been brought to perfection. But then... there were moments when some of the managers and designers doubted their success. The time factor was pressing. What would the diffusion plant be like, what sort of equipment was needed? At the start of 1946, no one knew exactly."

In April, 1946, A.I. Churin was appointed the director of the still unbuilt plant. Before this he had worked as the chief engineer of *Uralenergo* [Ural Energy]. Within two

years he was relieved of his post, and then after a short time returned again. But all this was later on. . .

Wandering in the Labyrinth

In January 1946, Professor I.N. Voznesenskiy was given the task of designing a 24-stage diffusion machine. In parallel a 30-stage variant was considered (codename "NVK"). The second project was transferred to Gorky (plant director Gen. A.S. Yelyan), where it was discarded. They began to produce finished items, and two aggregates had already been built when it became clear that this way was a dead end.

Storm clouds gathered. Moscow demanded explanations. And what could they answer, if no time was given for profound development, and the trial and error method was fraught with failures? They switched to single-stage machines. But the failures kept on. Someone had the idea—couldn't this be economic sabotage? Unable to withstand the stress and the nervous tension, Voznesenskiy died suddenly.

The machines of the Gorky design bureau were code-named "LB" (Lavrenti Beria), and later were called "OK" (special construction), while the Leningrad ones were designated by the letter "T." The entire plant complex was supposed to consist of 56 stages, 1,000 diffusion machines, an automatic control system, and auxiliary engineering services. At the start of 1948, special trains with the first items (called "reserved" trains in the traffic schedule) began to arrive at the rail yard of installation D-1. Assembly, installation and connecting in stages began.

I won't try to explain the complexity of the technology for producing highly enriched uranium. Special aggregates and electrical equipment, sensitive monitors and meters, reliable automatic systems, materials resistant to the aggressive media, vacuum units, and special bearings and lubricants were required. I will only say that to produce one kilogram of uranium of the necessary concentration, it was necessary to expend 600 thousand kilowatt-hours of electricity.

The bearings "broke." On thousands of machines. Their replacement required exhausting work, day and night. Suspicion of the management section of the laboratories and services increased, "voluntary informers" appeared. Work became a terrible ordeal—that was impossible, don't touch, that's not permitted. And what was permitted, how correct was it? Everyone who was associated with installation D-1 signed non-divulgence papers and was deprived of the right to transfer to other work. The most unpleasant occurrence was in mid-1948. It was not possible to achieve a 90% concentration of uranium. The reason was decided on at once: there was a shortage of "separating potential." And a solution was found: "Finish building the technological system, and add another thousand separating stages." But how could they do this, if project D-1 had not called for such reconstruction?

The Shadow of Trouble

The Leningrad design bureau No 1 proposed a variant. On 17 August it was reported to Vannikov. Boris Lvovich, standing behind his people completely (the words of Academician Lt-Gen Ye.A. Gegin), approved the project, but with this stipulation: "Calculate everything again, with a reserve, we won't give additional time to correct mistakes." They calculated again. Everything worked out. They began to work, and then. . .

At the end of September 1949, a special train traveled down the Moscow-Sverdlovsk road. Three passenger cars were unhitched and pushed to the Verkh-Neyvinsk region. They were parked on the railroad tracks opposite the building which housed the managers of the starting installation, who were in agony.

Among the arrivals was the "problem chief," L.P. Beria, the chief of the PGU B.L. Vannikov, member of the special council General A.M. Petrosyants and others. They began to look into the causes of failure of an assignment of special state importance. Beria kept taking notes and rechecking the names of those who spoke. Vannikov's position, and the proposal on "technical finishing" from the chief designer Sinev made it possible to soften or divert the threat. However, it was not possible to avoid "organizational conclusions" and personnel changes.

Deep autumn of 1949. Installation D-1 gained productive capacity (it was designed to produce just grams of uranium per day). All difficulties were seemingly past, but the concentration of "output product" did not exceed 75%, and they had to have 90%! What to do? Again the feverish search. They decided to do further enrichment at a then already operating unit in the Urals, which had been developed under the supervision of L.A. Artsimovich. It used the method of electromagnetic enrichment.

The Push to the Future

All the work on the uranium project was of priority importance. It was not possible to discuss every problem, and they popped up like mushrooms in the rain, at sessions of the Central Committee or Council of Ministers. The necessary decrees were prepared by members of the Special Committee, and Beria affixed Stalin's signature to them.

All the same, installation D-1 did produce uranium for atomic weapons. Fifty-six stages of 7,040 machines plus other special equipment operated without failure. After the first plant, D-3, D-4 and D-5 came on line. Science-intensive industry of the 20th century was gaining force.

Our first atomic bomb was tested on 27 August 1949, at 0230 hours. It had a plutonium charge. It was called RDS-1. What did this number code mean? First I thought of this expansion: "Stalin's rocket engine." Actually it was different: "Russia does it herself."

I named the names of only a few out of many, by no means because their merit was any different. All of them, privates and generals, technician/trouble-shooters and chief designers, laboratory assistants and academicians, were accomplishing one task, accomplishing it together, aware that their fortunes were uncertain and belonged to the state. They had a goal and no illusions. Today, probably, there are many people for whom this chronicle will be a first revelation.

Problems of CBW Destruction Viewed

PM1701125394 Moscow ROSSIYSKAYA GAZETA
in Russian 15 Jan 94 First Edition p 3

["Expert Analysis" article by Igor Vlasov, head of sector of the Russian Federation President's Committee on Problems of the Chemical and Biological Weapons Convention: "Chemical 'Thorns' in the Country's Side"]

[Text] The problem of the destruction of chemical weapons has alarmed the country's public. The sociopolitical situation has been sharply aggravated in the regions where it is planned to site installations for the destruction of the chemical weapons arsenal, and certain representatives of social movements are trying to exploit the currently fashionable topic of chemical disarmament in their own interests. Journalists are citing unverified facts, and people weighed down with science degrees are now trying to draw attention to themselves by making revelatory statements. The press increasingly often carries articles in which so-called chemical weapons experts who like to pose as major specialists try to intimidate the public with reports on the alleged continuation of scientific research into chemical weapons, their unauthorized destruction, secret burials on land and in water, and so forth.

In our view, such activity by "experts" and "selfless campaigners" is pursuing an unseemly aim: Using unverified and sometimes knowingly false statistics, they juggle this information around and impose on the public a distorted and unobjective view of the problem of the destruction of chemical weapons.

That is why I consider it expedient to examine consistently the basic stages in the implementation of the 1993 Convention on the Banning of Chemical Weapons.

First of all, I would recall that the state, which signed the Convention, is beginning work on the destruction of chemical weapons within a maximum of two years and will complete it no more than 10 years after the convention's entry into force. In the first stage, that is no more than two years after the ratification of the Convention, tests of the first facility for the destruction of chemical weapons will be carried out and then, no more than three years later, at least one percent of the stocks of these weapons is to be destroyed. In Russia's case this will mean 400 tonnes of toxic agents. In the subsequent stages, which are to be carried out no later than five, seven, and 10 years after the convention's entry into force, at least 20-45 percent of the weapons are to be destroyed, as are eventually all the

remaining stocks of chemical weapons. Each state will choose its own method of destruction independently. It should be noted that the destruction process is to correspond to the very latest scientific achievements and be carried out at specially equipped sites. Meanwhile, the destruction of toxic agents by burial on land, underwater, or by incineration in the open air is not permitted.

According to specialists' estimates, as far as Russia is concerned the Convention on Banning Chemical Weapons could come into force in 1995 and the operation of the first facility for the destruction of toxic agents could begin in 1997. Russian President B.N. Yeltsin made a statement in spring last year in which he said among other things: "The world has changed, Russia's position in the world has changed, and we do not intend to attack anyone. The time has come to get rid of chemical weapons—they are the past which we have inherited." Let us note that the problem of the destruction of chemical weapons is of great sociopolitical and social significance for Russia, due first and foremost to the need to lower the level of ecological tension in regions where the arsenals of these weapons are based. The program for the destruction of chemical weapons that the state is elaborating gives priority to the unconditional guarantee of safeguarding the life and health of the population as well as measures to protect the environment.

Social protection is also envisaged for the population living in zones where enterprises for the destruction of chemical weapons are to be sited: The latest technologies will be used and the volumes of toxic substances to be shipped across Russia's territory will be kept to a minimum. All this will involve considerable material expenditure especially since there is no special-purpose industrial facility for the destruction of chemical weapons in the Russian Federation.

The Committee on Problems of the Chemical and Biological Weapons Convention has been created to coordinate the verification of the fulfillment of international commitments in the sphere of the destruction of chemical and biological weapons. The policy of chemical disarmament in Russia has long needed an agency which would be independent of such powerful structures as the Defense Ministry and enterprises in the military-industrial complex, could carry out the process of disarmament in our country in a highly skilled and objective way, and could worthily represent Russia's interests in the international arena. Academician A. Kuntsevich, the well known scientist, was appointed chairman of this committee. In the past a military chemist, he made a major contribution to the creation of decontamination

procedures which render toxic substances harmless and he set up a scientific school.

...Today all Russia's chemical weapons stocks are housed in special-purpose arsenals of the Russian Federation Defense Ministry—these are the seven chemical "thorns" in Russia's side: The city of Kambarka and the settlement of Kizner (Udmurtia), the settlement of Gornyy (Saratov Oblast), the city of Shchuchye (Kurgan Oblast), the city of Pochep (Bryansk Oblast), the settlement of Leonilovka (Penza Oblast), and the settlement of Maradykovskiy (Kirov Oblast). The total quantity of chemical weapons is 40,000 tonnes, made up as follows: Organophosphorous toxic agents (sarin, zamin [as transliterated], and VX)—32,300 tonnes; mustard gas, lewisite, and their compounds—7,700 tonnes; and phosgene—5,000 tonnes. If the Paris convention is ratified, the process of the destruction of these weapons should begin in 1997.

To enable the Russian Federation to fulfill its international commitments, the Committee on Problems of the Chemical and Biological Weapons Convention under the Russian Federation President, in conjunction with the Russian Federation Defense Ministry, the Russian Federation Ministry of Ecology, the Russian Federation Ministry of Health, the Russian Academy of Sciences, and other ministries, elaborated in 1992 the draft first stage of the comprehensive program for the destruction of chemical weapons. Leaders of local administrations and representatives of public organizations in those regions where it is planned to site facilities for the destruction of chemical weapons took part in the discussion of this program. The draft was adopted after comments, amendments, and clarifications.

An essential condition of work on the draft is the public discussion of proposed decisions, a state ecological feasibility study of them, and the elaboration of the corresponding legislative acts. It is also recommended that a federal targeted program be elaborated to eliminate the consequences of the production of chemical weapons on the territory of the Russian Federation.

The chemical "thorns" can be removed from Russia's side only if there is a skilled, comprehensive, and well-balanced approach to the problem of the destruction of chemical weapons. Joint efforts are needed by scientific specialists, state and public organizations, and the local administration and population of the regions where the installations for the destruction of chemical weapons, one of the most treacherous types of weapon of mass destruction, are to be sited.

POLICY

Russian Federation Law on State Secrets

94UM0181A Moscow VOYENNNY VESTNIK in Russian
No 1, Jan 94 (signed to press 22 Dec 93) pp 5-15

[Text] This Law regulates relations arising in connection with defining information as state secrets, and with its declassification and protection in the interests of the Russian Federation's security.

SECTION I. GENERAL PROVISIONS**Article 1. Scope of This Law**

The provisions of this Law shall be binding in the Russian Federation and outside it upon bodies of representative, executive and judicial power (henceforth—bodies of state power), bodies of local self-management, enterprises, institutions and organizations, regardless of their organizational and legal form and their form of ownership, and upon officials and citizens of the Russian Federation who have accepted the obligations or are bound by their status to fulfill the requirements of legislation of the Russian Federation on state secrets.

Article 2. Basic Concepts Used in This Law

The following basic concepts shall be used in this Law:

- **state secrets**—information protected by the state and concerned with its military, foreign political, economic, intelligence, counterintelligence and operational investigative activity, dissemination of which may damage the security of the Russian Federation;
- **storage media of information comprising state secrets**—material objects, including physical fields, in which information comprising state secrets is reflected in the form of symbols, images, signals, technical concepts and processes;
- **the system of protection of state secrets**—the sum total of bodies for the protection of state secrets, the resources and methods they use to protect information comprising state secrets, and their storage media, as well as measures implemented for these purposes;
- **access to state secrets**—the procedure of granting citizens the right of access to information comprising state secrets, and enterprises, institutions and organizations the right to do work making use of such information;
- **access to information comprising state secrets**—a specific person's familiarization with information comprising state secrets that is sanctioned by an authorized official;
- **security classification**—requisites attesting to the degree of secrecy of information contained in its storage medium, affixed to the storage medium itself and (or) its accompanying documents;
- **information protection resources**—hardware, cryptographic resources, software and other resources intended to protect information comprising state secrets, the resources within which this information is embodied, and the resources for controlling the effectiveness of information protection.

Article 3. Legislation of the Russian Federation on State Secrets

Legislation of the Russian Federation on state secrets shall be based on the Constitution of the Russian Federation and the Law of the Russian Federation "On Security," and it shall include this Law as well as provisions of other legislative acts regulating relations pertaining to protection of state secrets.

Article 4. Powers of Bodies of State Power and Officials Related to Defining Information as State Secrets and Protecting It

1. The Supreme Soviet of the Russian Federation shall:

- provide for legislative regulation of relations pertaining to protection of state secrets;
- approve items of the republican budget of the Russian Federation as concerns funds allocated for the implementation of state programs in the area of protection of state secrets;
- exercise parliamentary control over fulfillment of legislation of the Russian Federation on state secrets, including when signing international treaties and intergovernment agreements;
- determine the authority of officials from the administration of the Supreme Soviet of the Russian Federation regarding protection of state secrets in the Supreme Soviet of the Russian Federation;
- resolve other issues within its competency pertaining to defining information as state secrets and to protecting it.

2. The President of the Russian Federation shall:

- approve state programs in the area of protection of state secrets;
- approve, upon submission by the Government of the Russian Federation, the composition and structure of the interdepartmental commission on protection of state secrets, and the statute on it;
- approve, upon submission by the Government of the Russian Federation, the List of Officials of Bodies of State Power Granted the Authority to Define Information as State Secrets, and the List of Information Defined as State Secrets;
- sign international treaties of the Russian Federation on joint use and protection of information comprising state secrets;
- determine the authority of officials in protecting state secrets in the administration of the President of the Russian Federation;
- resolve other issues in the area of defining information as state secrets and protecting it, within the limits of his competency.

3. The Government of the Russian Federation shall:

- organize execution of the Law of the Russian Federation "On State Secrets";
- submit, to the President of the Russian Federation for approval, the composition and structure of the interdepartmental commission on protection of state secrets and the statute on it;

- submit, to the President of the Russian Federation for approval, the List of Officials of Bodies of State Power Granted the Authority to Define Information as State Secrets;
- establish the procedure of drafting the List of Information Defined as State Secrets;
- organize development and fulfillment of state programs in the area of protection of state secrets;
- determine the authority of officials in protecting state secrets in the administration of the Government of the Russian Federation;
- establish the scope of privileges granted to citizens granted permanent access to state secrets and to associates of structural subdivisions for protection of state secrets, and the procedure of granting such privileges;
- establish the procedure of determining the extent of damage ensuing from unsanctioned dissemination of information comprising state secrets, as well as the damage done to the owner of the information as a result of its declassification;
- sign intergovernment agreements, implement measures to fulfill international treaties of the Russian Federation on joint use and protection of information comprising state secrets, and make decisions on the possibility of transferring the storage media of such information to other states.

In coordination with bodies for protection of state secrets located within their corresponding territories, bodies of state power of the Russian Federation, of republics comprising the Russian Federation, of the autonomous oblast, of autonomous okrugs, of krais, of oblasts, and of the cities of Moscow and St. Petersburg, and bodies of local self-management shall:

- provide for the protection of information comprising state secrets transferred to them by other bodies of state power and by enterprises, institutions and organizations, and information which they have classified themselves;
- provide for protection of state secrets at enterprises, institutions and organizations under their jurisdiction in accordance with the requirements of legislative acts of the Russian Federation;
- make background checks on citizens granted access to state secrets, within the limits of their competency;
- implement measures foreseen by legislation to restrict the rights of citizens and to grant privileges to persons who have or had access to information comprising state secrets;
- submit proposals to higher bodies of state power for improving the system for protection of state secrets.

5. Bodies of judicial power shall:

- examine criminal and civil cases of violations of legislation of the Russian Federation on state secrets;
- provide legal protection to citizens, bodies of state power, enterprises, institutions and organizations in connection with their activity associated with protecting state secrets;

- provide for the protection of state secrets in the course of examination of the indicated cases;
- determine the authority of officials to protect state secrets in bodies of judicial power.

SECTION II. INFORMATION DEFINED AS STATE SECRETS

Article 5. Information That May be Defined as State Secrets

The following information may be defined as state secrets:

1) Information in the military area:

- on the content of strategic and operational plans and of military command and control documents pertaining to preparation and conduct of operations and to strategic, operational and mobilizational deployment of forces, on their combat effectiveness and mobilizational readiness, and on creation and use of mobilizational resources;
- on the directions of development of armament and military equipment, and on the content and results of specific-purpose programs, scientific research and experimental design work aimed at designing and modernizing models of armament and military equipment;
- on the quantity, design and manufacturing procedures of nuclear and special weapons, and the technical resources and methods of their protection from unsanctioned use;
- on specification, performance characteristics and possibilities for combat use of models of armament and military equipment, and the properties, recipes or procedures of manufacturing new types of rocket propellant or military explosives;
- on the disposition, purpose, readiness and degree of protection of high-security and especially important facilities, on their planning and construction, and on allocation of land, subsoil and water areas for these facilities;
- on the disposition, real names, organizational structure, armament and numerical strength of large strategic formations, combined units and units of the Armed Forces of the Russian Federation.

2) Information in the areas of economics, science and technology:

- on the content of plans for preparation of the Russian Federation and its individual regions for possible military actions, on the mobilizational capacities of industry for manufacturing armament and military equipment, on delivery volumes and reserves of strategic raw materials and supplies, and on the distribution and actual dimensions of state material reserves;
- on use of the infrastructure of the Russian Federation in the interests of providing for its defense capability and security;

- on civil defense forces and resources, on the disposition, purpose and degree of protection of administrative and public safety facilities, and on the functions of industry, transportation and communications in the Russian Federation as a whole;
 - on the volumes and plans (assignments) of state defense orders, on production and deliveries (in monetary or physical terms) of armament, military equipment and other defense products, on presence and augmentation of the capacities for their production, on cooperative ties of enterprises, and on developers or manufacturers of the indicated armament, military equipment and other defense products;
 - on scientific research, experimental design, planning and production procedures having important defensive or economic significance influencing the security of the Russian Federation;
 - on state reserves of precious metals and gems of the Russian Federation, and on its finances and budgetary policy (besides general indicators characterizing the overall state of the economy and finances).
- 3) Information in the area of foreign policy and economics:
- on foreign political and foreign economic (commercial, credit and foreign exchange) activity of the Russian Federation, premature dissemination of which may do damage to its interests.
- 4) Information in the area of intelligence, counterintelligence and operational investigative activity:
- on forces, resources, methods, plans and results of intelligence, counterintelligence and operational investigative activity, as well as data on the financing of this activity, if these data reveal the nature of the listed information;
 - on persons cooperating or who had cooperated confidentially with agencies engaging in intelligence, counterintelligence and operational investigative activity;
 - on the system of government and other forms of special communications, on state codes, and on the methods and resources of their analysis;
 - on methods and resources of protecting secret information;
 - on state programs and measures in the area of protection of state secrets.

SECTION III. CLASSIFICATION OF INFORMATION AND ITS STORAGE MEDIA

Article 6. Principles of Information Classification

Classification of information and its storage media shall be defined as imposition, according to the procedure foreseen by this Law for such information, of restrictions upon dissemination of information comprising state secrets and upon access to its storage media.

Information shall be classified in accordance with the principles of lawfulness, justification and timeliness.

The lawfulness of classifying information shall mean correspondence of the classified information to provisions of articles 5 and 7 of this Law and legislation of the Russian Federation on state secrets.

Justification of information classification shall mean establishing, by expert examination, the suitability of classifying specific information, and of the probable economic and other consequences of this act on the basis of the balance of the vitally important interests of the state, the society and citizens.

Timeliness of information classification shall mean establishing restrictions upon dissemination of this information from the moment of its acquisition (generation), or in advance of this moment.

Article 7. Information not Subject to Classification

The following information shall not be classified:

- on emergencies and catastrophes jeopardizing the safety and health of citizens, on their consequences, and on natural disasters and their official forecasts and consequences;
- on the state of ecology, public health, sanitation, demography, education, culture and agriculture, and on the state of crime;
- on privileges, compensations and benefits granted by the state to citizens, officials, enterprises, institutions and organizations;
- on cases of violation of the rights and freedoms of the individual and the citizen;
- on the dimensions of the gold reserve and state currency reserves of the Russian Federation;
- on the health of the highest officials of the Russian Federation;
- on cases of violation of the law by bodies of state power and by their officials.

Officials who decide to classify the listed information or to include it for these purposes in storage media of information comprising state secrets shall bear criminal, administrative or disciplinary liability depending on the material and moral damage done to society, the state and citizens. Citizens shall have the right to appeal such decisions in court.

Article 8. Degree of Secrecy of Information and the Security Classifications of the Storage Media of This Information

The degree of secrecy of information comprising state secrets must correspond to the severity of the damage that may be done to the security of the Russian Federation as a result of dissemination of the indicated information.

Three degrees of secrecy of information comprising state secrets and security classifications corresponding to these degrees for the storage media of the indicated

information—"special importance," "top secret" and "secret"—shall be established.

The procedure for determining the dimensions of damage that may be done to the security of the Russian Federation as a result of dissemination of information comprising state secrets, and the rules of awarding a particular degree of secrecy to the indicated information, shall be established by the Government of the Russian Federation.

Use of the listed security classifications to classify information not defined as state secrets shall be prohibited.

Article 9. Procedure for Defining Information as State Secrets

Information shall be defined as state secrets in accordance with its origination in a particular sector, department or special-purpose program.

Justifying the need for defining information as state secrets in accordance with the principles of information classification shall be the responsibility of bodies of state power, enterprises, institutions and organizations obtaining (generating) this information.

Information shall be defined as state secrets by the chief executives of bodies of state power in accordance with the List of Officials Granted the Authority to Define Information as State Secrets, approved by the President of the Russian Federation.

The indicated persons shall bear personal liability for their decisions regarding the suitability of defining specific information as state secrets.

The interdepartmental commission on protection of state secrets shall draw up the List of Information Defined as State Secrets in order to enact a unified state policy in the area of classifying information. The bodies of state power granted the authority to dispose of such information shall be indicated in this List. This List shall be approved by the President of the Russian Federation; it shall be published in the overt press, and it shall be reviewed as necessary.

Bodies of state power whose chief executives have been granted the authority to define information as state secrets shall draw up expanded lists of information subject to classification. Information in regard to which the indicated bodies had been granted the authority of disposal shall be included and the degree of its secrecy shall be established in these lists. Separate lists of information subject to classification may be drawn up within the framework of specific-purpose programs for the development and modernization of models of armament and military equipment, and on experimental design and scientific research by decision of the clients for the indicated models and work. These lists shall be approved by the corresponding chief executives of bodies of state power. The suitability of classifying such lists shall be determined by their content.

Article 10. Restriction of the Rights of Ownership of Information by Enterprises, Institutions, Organizations and Citizens of the Russian Federation in Connection With Its Classification

Officials granted the authority to define information as state secrets in accordance with the procedure foreseen by Article 9 of this Law shall have the right to make decisions on classifying information owned by enterprises, institutions, organizations and citizens (henceforth—the owner of information), if this information is listed in the List of Information Defined as State Secrets. This information shall be classified at the request of the owners of the information or the corresponding bodies of state power.

Material damage done to the owner of information in connection with its classification shall be compensated by the state in amounts determined in an agreement between the body of state power into the possession of which this information is transferred, and its owner. The agreement shall also foresee obligations of the owner of the information pertaining to its nondissemination. Should the owner of the information refuse to sign an agreement, he shall be warned of his liability for unsanctioned dissemination of information comprising state secrets in accordance with currently effective legislation.

The owner of information shall have the right to appeal in court the actions of officials which in the opinion of the owner of the information infringe upon his rights. In the event of recognition of the actions of officials to be unlawful by the court, the procedure by which damage done to the owner of the information is to be compensated shall be determined by a decision of the court in accordance with currently effective legislation.

The right of ownership of information by foreign organizations and foreign citizens may not be restricted if this information was obtained (generated) without violating legislation of the Russian Federation.

Article 11. Procedure for Classifying Information and Its Storage Media

The grounds for classifying information obtained (generated) as a result of administrative, production, scientific and other forms of activity by bodies of state power, enterprises, institutions and organizations shall be defined as its correspondence to the lists of information subject to classification effective in the given bodies, at the given enterprises and in the given institutions and organizations. When this information is classified, the corresponding security classification shall be awarded to its storage media.

When it is impossible to identify obtained (generated) information with information contained in the currently effective list, officials of bodies of state power, enterprises, institutions and organizations shall be obligated to provide for interim classification of the obtained (generated) information in accordance with the proposed

degree of secrecy, and send proposals on supplementing (amending) the list within a month's time to the official who had approved this list.

The officials who had approved the currently effective list shall be obligated to organize, within 3 months' time, expert examination of the submitted proposals, and adopt a decision to supplement (amend) the currently effective list or to remove the interim security classification awarded to the information.

Article 12. Requisites of Storage Media of Information Comprising State Secrets

Requisites including the following data shall be applied to storage media of information comprising state secrets:

- on the degree of secrecy of the information contained in the storage medium, with reference to the corresponding item on the list of information subject to classification currently in effect in the given body of state power, at the given enterprise and in the given institution and organization;
- on the body of state power, on the enterprise, and on the institution and organization classifying the storage medium;
- on the registration number;
- on the date or conditions of declassification of the information, or on events following which the information will be declassified.

When it is impossible to apply such requisites to the storage medium of information comprising state secrets, these data shall be indicated in documents accompanying this storage medium.

If the storage medium contains parts characterized by different degrees of secrecy, each of these parts shall be awarded the corresponding security classification, while the security classification corresponding to the security classification awarded to its part contain information having the highest degree of secrecy for the given storage medium shall be awarded to the storage medium as a whole.

Besides the requisites listed in this article, additional entries determining the authority of officials to acquaint themselves with information contained in this storage medium may be affixed on the storage medium and (or) on documents accompanying it. The form and procedure of affixing such additional entries and requisites shall be determined by standards approved by the Government of the Russian Federation.

SECTION IV. DECLASSIFICATION OF INFORMATION AND ITS STORAGE MEDIA

Article 13. Procedure of Information Declassification

Declassification of information and its storage media shall be defined as the removal of restrictions, introduced previously according to procedure foreseen by this Law, on dissemination of information comprising state secrets and on access to its storage media.

The grounds for declassifying information shall be:

- the Russian Federation's assumption of international obligations of open exchange of information comprising state secrets in the Russian Federation;
- change in objective circumstances owing to which further protection of information comprising state secrets is unsuitable.

Bodies of state power whose chief executives have been granted authority to define information as state secrets shall be obligated to review, periodically but not less than once every 5 years, the content of lists of information subject to classification effective in bodies of state power, at enterprises and in institutions and organizations, as regards the justification for classifying the information and its correspondence to the previously established degree of secrecy.

The term of classification of information comprising state secrets must not exceed 30 years. In exceptional cases this term may be lengthened on the basis of a conclusion of the interdepartmental commission on protection of state secrets.

The right to amend lists of information subject to classification effective in bodies of state power, at enterprises and in institutions and organizations shall be granted to the chief executives of bodies of state power who had approved them, who bear personal liability for the justification of their decisions to declassify the information. Decisions of the indicated chief executives involving amendment of the list of information defined as state secrets shall be coordinated with the interdepartmental commission on protection of state secrets, which shall have the right to suspend and protest these decisions.

Article 14. Procedure for Declassifying Storage Media of Information Comprising State Secrets

Storage media of information comprising state secrets shall be declassified no later than after the term established at the time of their classification. Storage media shall be subject to declassification prior to expiration of this term if the provisions of the list currently effective in the given body of state power, the enterprise, the institution and organization on the basis of which they were classified are amended.

In exceptional cases the right to lengthen the initially established term of declassification of storage media of information comprising state secrets shall be granted to chief executives of state bodies authorized to define the corresponding information as state secrets, on the basis of the conclusion of an expert commission appointed by them according to established procedure.

Chief executives of bodies of state power, enterprises, institutions and organizations shall be authorized to declassify the storage media of information that was unjustifiably classified by officials subordinated to them.

Chief executive of state archives of the Russian Federation shall be authorized to declassify the storage media of

information comprising state secrets stored in the closed collections of these archives, in the event that such authority is delegated to them by the collection-forming organization or its successor. In the event of liquidation of the collection-forming organization and absence of its successor, the question of the procedure for declassifying storage media of information comprising state secrets shall be examined by the interdepartmental commission on protection of state secrets.

Article 15. Fulfillment of Requests by Citizens, Enterprises, Institutions, Organizations and Bodies of State Power of the Russian Federation to Declassify Information

Citizens, enterprises, institutions, organizations and bodies of state power of the Russian Federation shall have the right to submit a request to bodies of state power, enterprises, institutions and organizations, including state archives, to declassify information defined as state secrets.

Bodies of state power, enterprises, institutions and organizations, including state archives, that receive such a request shall be obligated to examine it within 3 months and issue a substantiated reply on the essence of the request. If they are not authorized to resolve the question of declassifying the requested information, the request shall be transferred, within a month of its submission, to the body of state power possessing such authority, or to the interdepartmental commission on protection of state secrets; citizens, enterprises, institutions, organizations and bodies of state power of the Russian Federation submitting the request shall be informed of such action.

Refusal of officials to examine the merits of a request shall incur administrative (disciplinary) liability in accordance with currently effective legislation.

The justifications of defining information as state secrets may be appealed in court. When the court recognizes classification of information to be unjustified, this information shall be subject to declassification according to the procedure established by this Law.

SECTION V. DISPOSITION OF INFORMATION COMPRISING STATE SECRETS

Article 16. Mutual Transfer of Information Comprising State Secrets by Bodies of State Power, Enterprises, Institutions and Organizations

Mutual transfer of information comprising state secrets shall be effected by bodies of state power, enterprises, institutions and organizations which are not subordinated to one another and which are not engaged in joint work, with the sanction of the body of state power having this information at its disposal in accordance with Article 9 of the Law.

Bodies of state power, enterprises, institutions and organizations requesting information comprising state secrets shall be obligated to create conditions providing for protection of this information. Their chief executives

shall bear personal liability for failure to observe established restrictions on familiarization with information comprising state secrets.

Fulfillment of requirements foreseen in Article 27 of the Law by bodies of state power, enterprises, institutions and organizations to whom information comprising state secrets is transferred shall be a mandatory prerequisite of such transfer.

Article 17. Transfer of Information Comprising State Secrets in Connection With Fulfillment Joint and Other Work

Information comprising state secrets shall be transferred to enterprises, institutions, organizations or citizens, in connection with fulfillment of joint and other work, by the client for this work with the permission of the body of state power having the corresponding information at its disposal in accordance with Article 9 of this Law, and only to the extent necessary for fulfillment of this work. In this case prior to transfer of information comprising state secrets, the client shall be obligated to ascertain possession of a license by the enterprise, institution or organization for the performance of work using information of the corresponding degree of secrecy, and possession of the corresponding permit by citizens.

Enterprises, institutions or organizations, including ones not under state forms of ownership, may sign agreements with state enterprises, institutions or organizations on utilizing the services of their structural subdivisions to protect state secrets when performing joint or other work (obtaining state orders) and when the necessity of using information comprising state secrets arises in connection with this; the corresponding entry shall be made in the licenses of both agreeing parties to perform work using information comprising state secrets.

An agreement to perform joint and other work signed in accordance with procedure established by law shall foresee mutual obligations of the parties to safeguard information comprising state secrets both during the work and after its completion, and the terms of financing work (services) to protect information comprising state secrets.

Organization of control over the effectiveness of protecting state secrets during joint and other work shall be the responsibility of the client for this work in accordance with provisions of the agreement signed by the parties.

When an executor violates his obligations of protecting state secrets in the course of joint and other work, the client shall have the right to suspend fulfillment of the order until the violation is eliminated, and in the case of repeat violations, to raise the issue of annulling the order and the licenses for work using information comprising state secrets, and of punishing the offenders. In this case material damage inflicted by the executor upon the state, as represented by the client, shall be recovered in accordance with currently effective legislation.

Article 18. Transfer of Information Comprising State Secrets to Other States

The decision to transfer information comprising state secrets to other states shall be made by the Government of the Russian Federation in the presence of an expert conclusion of the interdepartmental commission on protection of state secrets regarding the possibility for transferring this information.

Obligations of the receiving party to protect information transferred to it shall be foreseen by a treaty (agreement) signed with it.

Article 19. Protection of Information Comprising State Secrets and Change in the Functions of the Subjects of Legal Relations

In the event of changes in their functions, forms of ownership, liquidation or termination of work using information comprising state secrets, bodies of state power, enterprises, institutions and organizations possessing information comprising state secrets shall be obligated to implement measures to protect this information and its storage media. In this case the storage media of information comprising state secrets shall be destroyed according to established procedure, surrendered to archives for storage, or transferred:

- to the successor of the body of state power, enterprise, institution or organization possessing information comprising state secrets, if the successor is authorized to perform work using the indicated information;
- to the body of state power having the corresponding information at its disposal in accordance with Article 9 of this Law;
- to another body of state power, enterprise, institution or organization as instructed by the interdepartmental commission on protection of state secrets.

SECTION VI. PROTECTION OF STATE SECRETS**Article 20. Bodies for Protection of State Secrets**

Bodies for protection of state secrets shall include:

- the interdepartmental commission on protection of state secrets;
- bodies of federal executive power (the Russian Federation Ministry of Security, the Russian Federation Ministry of Defense, the Federal Agency for Government Communication and Information under the President of the Russian Federation), the Foreign Intelligence Service of the Russian Federation, the State Technical Commission under the President of the Russian Federation and their local bodies;
- bodies of state power, enterprises, institutions and organizations, and their structural subdivisions for protection of state secrets.

The interdepartmental commission on protection of state secrets shall be a group decision-making body coordinating the activity of bodies of state power protecting state secrets in the interests of developing and fulfilling state programs,

standards and methodological documents facilitating implementation of legislation of the Russian Federation on state secrets. The functions of the interdepartmental commission on protection of state secrets shall be carried out and its supradepartmental authority shall be exercised in accordance with the Statute on the Interdepartmental Commission on Protection of State Secrets approved by the President of the Russian Federation.

Bodies of federal executive power (the Russian Federation Ministry of Security, the Russian Federation Ministry of Defense, the Federal Agency for Government Communication and Information under the President of the Russian Federation), the Foreign Intelligence Service of the Russian Federation, the State Technical Commission under the President of the Russian Federation and their local bodies shall organize and provide for protection of state secrets in accordance with functions imposed upon them by legislation of the Russian Federation.

Bodies of state power, enterprises, institutions and organizations shall provide for the protection of information comprising state secrets in accordance with the tasks imposed on them, and within the limits of their competency. Responsibility for organization protection of information comprising state secrets in bodies of state power, enterprises, institutions and organizations shall be borne by their chief executives. Depending on the volume of work using information comprising state secrets, chief executives of bodies of state power, enterprises, institutions and organizations shall create structural subdivisions for protection of state secrets, the functions of which shall be determined by the indicated chief executives in accordance with standards approved by the Government of the Russian Federation, and with regard for the particular features of their work.

Protection of state secrets shall be a principal form of activity of the body of state power, enterprise, institution or organization.

Article 21. Access of Officials and Citizens to State Secrets

Access of officials and citizens of the Russian Federation to state secrets shall be voluntary.

Access of persons with dual citizenship, persons without citizenship and persons who are foreign citizens, emigrants and re-emigrants to state secrets shall be according to procedure established by the Government of the Russian Federation.

Access of officials and citizens to state secrets shall foresee:

- their acceptance of obligations before the state not to disseminate information comprising state secrets entrusted to them;
- consent to partial, temporary restriction of their rights in accordance with Article 24 of this Law;
- their written consent to undergo background checks by authorized bodies;

- a determination of the forms, dimensions and procedure of granting privileges foreseen by this Law;
- acquaintance with rules of legislation of the Russian Federation on state secrets foreseeing liability for its violation;
- adoption of a decision by the chief executive of the body of state power, enterprise, institution or organization regarding access of the applicant to information comprising state secrets.

The volume of background checks shall depend on the degree of secrecy of the information to which the applicant is to be granted access. Background checks shall be carried out in accordance with legislation of the Russian Federation. The goal of background checks shall be to reveal grounds foreseen by Article 22 of this Law.

The following privileges shall be established for officials and citizens granted permanent access to state secrets:

- percent wage increases depending on the degree of secrecy of information to which they have access;
- a preferential right, under otherwise equal conditions, to retain their job when bodies of state power, enterprises, institutions and organizations carry out organizational and (or) staff measures.

A percent wage increase for time of service in structural subdivisions for protection of state secrets shall be established for associates of the indicated structural subdivisions in addition to the privileges established for officials and citizens granted permanent access to state secrets.

Mutual obligations of the administration and the applicant shall be reflected in a labor agreement (contract). Signing a labor agreement (contract) before competent bodies complete a background check shall be prohibited.

Three forms of access to state secrets by officials and citizens shall be established in correspondence with the three degrees of secrecy of information comprising state secrets: to information of special importance, to top secret information or to secret information. Access to information of a higher degree of secrecy awarded to officials and citizens shall constitute grounds for their access to information of lower secrecy.

The period, circumstances and procedure of reapplying for access of citizens to state secrets shall be established by standards approved by the Government of the Russian Federation.

The procedure of granting access of officials and citizens to state secrets under the conditions of an announced state of emergency may be changed by the President of the Russian Federation.

Article 22. Grounds for Denying Access of an Official or Citizen to State Secrets

Grounds for denying access of an official or citizen to state secrets may be:

- his recognition by the court to be incompetent, marginally competent or an especially dangerous recidivist, his state of being on trial or under investigation for state and other serious crimes, and presence of an unremitted conviction for these crimes;
- presence of medical contraindications for work involving the use of information comprising state secrets, in accordance with a list approved by the Russian Federation Ministry of Health;
- permanent residence of himself and (or) his close relatives abroad and (or) preparation of documents by the indicated persons for departure to other states for permanent residence;
- revelation, by background checks, of actions of the applicant threatening the security of the Russian Federation;
- his refusal to undergo a background check and (or) his communication of knowingly false questionnaire data.

The decision to deny access of an official or citizen to state secrets shall be made by the chief executive of the body of state power, enterprise, institution or organization on an individual basis with regard for the results of background checks. A citizen shall have the right to appeal this decision to a higher organization or in court.

Article 23. Conditions for Termination of Access of an Official or Citizen to State Secrets

Access of an official or citizen to state secrets may be terminated by a decision of the chief executive of the body of state power, enterprise, institution or organization in cases of:

- dissolution of his labor agreement (contract) in connection with organizational and (or) staff measures;
- a single violation by him of obligations foreseen by the labor agreement (contract) associated with protection of state secrets, and accepted by him;
- the advent of circumstances which in accordance with Article 22 of this Law serve as grounds for denial of access of the official or citizen to state secrets.

Termination of access of an official or citizen to state secrets shall be additional grounds for dissolving a labor agreement (contract) with him, if such conditions are foreseen in the labor agreement (contract).

Termination of access to state secrets shall not release the official or citizen from obligations accepted by him to not disseminate information comprising state secrets.

A decision of the administration to terminate access of an official or citizen to state secrets and to dissolve a labor agreement (contract) on this basis may be appealed to a higher organization or in court.

Article 24. Restrictions on the Rights of an Official or Citizen Having Access or Having Had Access to State Secrets

An official or citizen having access or having had access to state secrets may be temporarily restricted in his rights. These restrictions may pertain to:

- the rights of departure from the country for a period stipulated in the labor agreement (contract) at the time of the citizen's application for access to state secrets;
- the right to disseminate information comprising state secrets, and to use discoveries and inventions containing such information;
- the rights to inviolability of private life during background checks conducted during the time of application for access to state secrets.

Article 25. Organization of Access of an Official or Citizen to Information Comprising State Secrets

Organizing access of an official or citizen to information comprising state secrets shall be the responsibility of the chief executive of the corresponding body of state power, enterprise, institution or organization, as well as of structural subdivisions for protection of state secrets. The procedure of granting access of an official or citizen to information comprising state secrets shall be established by standards approved by the Government of the Russian Federation.

Chief executives of bodies of state power, enterprises, institutions and organizations shall bear personal responsibility for creating conditions under which an official or citizen is able to acquaint himself only with that information comprising state secrets, and in those volumes, which are necessary for him to carry out his official (functional) duties.

Article 26. Liability for Violation of Legislation of the Russian Federation on State Secrets

Officials and citizens guilty of violating legislation of the Russian Federation on state secrets shall bear criminal, administrative, civil or disciplinary liability in accordance with currently effective legislation.

The rights and lawful interests of citizens, bodies of state power, enterprises, institutions and organizations within the sphere of action of this Law shall be protected by court or other procedures foreseen by this Law.

Article 27. Access of Enterprises, Institutions and Organizations to Work Associated With the Use of Information Comprising State Secrets

Access of enterprises, institutions and organizations to work associated with the use of information comprising state secrets, with creation of resources for protecting information, and with implementation of measures and (or) rendering of services to protect state secrets shall be permitted on the basis of licenses to work with information of the corresponding degree of secrecy, obtained by them according to a procedure established by the Government of the Russian Federation.

A license to do such work shall be issued on the basis of the results of special expert examination of the enterprise, institution and organization, and state certification of their chief executives responsible for protection of information comprising state secrets, the expenses of

which shall be borne by the enterprise, institution or organization receiving the license.

A license to do work using information comprising state secrets shall be issued to an enterprise, institution or organization upon its fulfillment of the following conditions:

- fulfillment of the requirements of standards approved by the Government of the Russian Federation on providing for the protection of information comprising state secrets in the course of work associated with the use of the indicated information;
- presence, within their structure, of subdivisions for protection of state secrets, and specially trained associates for work in the protection of information, the number and qualifications of which are sufficient to provide for the protection of state secrets;
- presence of certified information protection resources.

Article 28. Procedure of Certifying Information Protection Resources

Information protection resources must be accompanied by a certificate indicating their satisfaction of the requirements on protection of information of the corresponding degree of secrecy.

Organization of the certification of information protection resources shall be the responsibility of the State Technical Commission under the President of the Russian Federation, the Russian Federation Ministry of Security, the Federal Agency for Government Communication and Information under the President of the Russian Federation, and the Russian Federation Ministry of Defense in accordance with functions imposed on them by legislation of the Russian Federation. Certification shall be based on requirements of state standards of the Russian Federation and other standards approved by the Government of the Russian Federation.

Coordination of work to organize certification of information protection resources shall be the responsibility of the interdepartmental commission on protection of state secrets.

SECTION VII. FINANCING OF MEASURES TO PROTECT STATE SECRETS

Article 29. Financing of Measures to Protect State Secrets

Activity of bodies of state power, budget-supported enterprises, institutions and organizations and their structural subdivision for protection of state secrets shall be financed out of funds of the corresponding budgets, while that of other enterprises, institutions and organizations shall be financed out of funds obtained from their principal activity in the performance of work associated with the use of information comprising state secrets.

Funds to finance state programs in the area of protection of state secrets shall be foreseen as a separate item in the federal budget of the Russian Federation.

Expenditure of financial resources allocated for measures to protect state secrets shall be controlled by the chief executives of bodies of state power, enterprises, institutions and organizations, work clients, and representatives of the Russian Federation Ministry of Finance specially authorized for this. If such control is associated with access to information comprising state secrets, the listed persons must be cleared for information of the corresponding degree of secrecy.

SECTION VIII. CONTROL AND OVERSIGHT OF PROTECTION OF STATE SECRETS

Article 30. Parliamentary Control

Control by the Supreme Soviet of the Russian Federation over fulfillment of legislation of the Russian Federation on state secrets and of expenditure of financial resources allocated for this purpose shall be effected by the corresponding permanent chamber commissions and committees of the Supreme Soviet of the Russian Federation. Bodies of state power protecting state secrets shall be obligated to submit the necessary information to the indicated committees and commissions. Information comprising state secrets shall be provided to bodies of state power in accordance with legislation of the Russian Federation.

Article 31. Interdepartmental and Departmental Control

Interdepartmental control of protection of state secrets in bodies of state power, at enterprises and in institutions and organizations shall be maintained by bodies of federal executive power (the Russian Federation Ministry of Security, the Russian Federation Ministry of Defense, the Federal Agency for Government Communication and Information under the President of the Russian Federation), the Foreign Intelligence Service of the Russian Federation, the State Technical Commission under the President of the Russian Federation and their local bodies, upon which this function is imposed by legislation of the Russian Federation.

Bodies of state government given the authority to dispose of information comprising state secrets in accordance with this Law shall be obligated to control the effectiveness of this information's protection in all subordinated bodies of state power, enterprises, institutions and organizations working with such information.

Control over protection of state secrets in the administrations of the Supreme Soviet of the Russian Federation, the President of the Russian Federation and the Government of the Russian Federation shall be organized by their chief executives.

Control over protection of state secrets in judicial bodies and in bodies of the procuracy shall be organized by the chief executives of these bodies.

Article 32. Procuracy Oversight

Oversight of observance of legislation when providing protection to state secrets, and of the lawfulness of decisions adopted in this case, shall be maintained by the General Procurator of the Russian Federation and procurators subordinated to him.

Access of persons maintaining procuracy oversight to information comprising state secrets shall be in accordance with Article 25 of this Law.

President of the Russian Federation B. Yeltsin
Moscow, Russian Palace of the Soviets
21 July 1993
No 5485-1

GROUND TROOPS

'Grad', 'Uragan' Multiple Rocket Launchers

94UM0173A Moscow VOYENNYE ZNANIYA
in Russian No 3, Mar 93 pp 9, C3

[Article by Engineer A. Shirokorad: "'Grad' and 'Uragan'—These Are Not Bad Weather Phenomena"]

[Text] The "Grad" 122 mm and "Uragan" 220 mm multiple rocket launcher systems are the most widely used modern domestically-produced systems.

The "Grad" system on a BM-21 mount was accepted into the Soviet Army inventory in 1963 and recommended itself well in combat operations on Damanskiy Island, in the Middle East and in Afghanistan.

The "Uragan" Multiple Rocket Launcher System (9K57) was accepted into the inventory in 1976 and also had combat employment in Afghanistan. Unfortunately, right now these systems are being widely utilized in interethnic conflicts on the territory of the former USSR.

Because the dimensions and weight of the BM-21 mount were comparatively large, the light BM-21V mount, in which the number of 122 mm tubes was reduced from 40 to 12, was developed for the VDV [Airborne Troops].

The basic device of both systems is nearly identical. The combat vehicle consists of an artillery section and a chassis of a specially equipped motor vehicle. The artillery section consists of tube launchers, a cradle, a base, elevating, traversing and leveling mechanisms, a launcher frame, aiming devices, an electric drive and auxiliary equipment.

The rocket projectiles of both multiple rocket launcher systems are also identically constructed. They have tail assemblies, the fins of which are secured by a ring in the closed position. When the contacts of the current distributor close, pulses of current flow to the contact sector of the projectile which results in the actuation of the squibs and the ignition of the powder charge. The gases that are formed tear away the contact lid and powder gases begin to escape through the nozzle opening. When the engine increases thrust, the projectile's lead pin comes out of the launcher's stopper-rod device and slips along its groove, forcing the rocket projectile to rotate with regard to the longitudinal axis. The tail assembly's fins unfold when it flies out of the tube and the MRV or MRV-U fuze is armed at a distance of 150-450 meters from the combat

vehicle. The M-21-OF 122 mm high-explosive-fragmentation projectile and the 9M27F 220 mm high-explosive projectile are constructed in the same way.

9M27K 220 mm projectiles are differentiated from high-explosive projectiles by a cluster portion that consists of 30 1.85 kg fragmentation cluster submunitions. These rocket projectiles are equipped with a mechanical time fuze (120 second maximum time of operation). The fuze is set manually by the crew (using a key). After the projectile leaves the launcher, the fuze activates after the assigned time. The fuze's fuses of fire ignites the warhead's burster. The fuzes of the cluster submunitions are armed from the pressure and temperature of the gases formed, the warhead breaks up, and they are dispersed in

the direction of the projectile's movement. When a submunition encounters an obstacle, its fuze activates and an explosion occurs.

During firings at short distances (1.5-5 km), all rocket projectiles provide a probable error range of 100 meters and the Firing Table states: "Conduct firing at ranges of less than 5 km in exceptional situations and only when friendly troops are not in the line of fire". Therefore, you need to be very careful when you read about cases of direct laying by rocket projectiles against tanks with massive destruction of the latter that are often described in the literature. But 122 mm and 220 mm rocket projectiles are an adequately modern and effective weapon to carry out organic missions, all the more so that far from all of the "Grad" and "Uragan" systems' munitions were cited in the article and some quite "exotic" projectiles are among those that were not named.

Tactical-Technical Specifications of Multiple Rocket Launcher System Combat Vehicles

Designation	BM-21	BM-21V	BM-22 (9K57)
Chassis	Ural-375D	GAZ-66B	BAZ-135LM
Projectile caliber, mm	122	122	122
Number of tubes (launchers)	40	12	16
Weight of the combat vehicle in the combat configuration, kg	13,700	approximately 6,000	approximately 20,200
Time of complete salvo, seconds	20	6	
Maximum speed along paved roads, kph	75	85	69

Tactical-Technical Specifications of Rocket Projectiles

Model	M-21-OF	9M27F	9M27K
Caliber, mm	122	220	220
Projectile length, mm/calibers	2,870/23.5	4,832/22.0	5,178/23.5
Projectile weight, kg	66	280.4	271.1
Warhead weight, kg	18.4	99.05	89.5
Maximum firing range, km	20.1	35.8	35.0

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Specifications of 2S6M 'Tunguska' Air Defense System

94UM0174A Moscow VOYENNNYYE ZNANIYA
in Russian No 5, May 93 pp 10-11

[Article by A. Shirokorad: "With Missile and Projectile"]

[Text] "Are there systems similar to the American ADATS [Air Defense Anti-Tank System] in our Armed Forces?"

"S. Kurganov (Kemerovo Oblast)"

The 2S6M "Tunguska" Self-Propelled Air Defense System, the first domestically-produced air defense system with the 2K22M missile-gun complex, entered the inventory at the beginning of the 1980's. Batteries consisting of six of these systems provide the air defense of motorized-rifle and tank regiments.

Initially, let's examine the missile portion of the air defense system. Eight launchers with 9M311 missiles housed in canisters are mounted on it. The missile is 2,562 mm long, weighs 42 kg, and has a 9 kg fragmentation-continuous rod warhead. Its maximum speed is up to 900 meters per second [mps] and its average speed is 600 mps. It is capable of destroying aircraft (helicopters) that are flying at speeds of up to 500 mps. Missile firings are conducted in place or from a short halt when the target is within visual range. It has a semiautomatic radio command guidance system with manual target tracking and automatic placement of the missile on the sighting line based upon signals that are transmitted via a radio channel. The warhead has a proximity fuze with an operating radius of five meters.

Two 2A38 30 mm twin-barrel automatic guns that were developed under the leadership of V. Gryazev make up the artillery portion of the air defense system. The rate of fire of one automatic gun is 1,950-2,500 rounds per minute. The automatic gun operates on the energy of

powder gases that are eliminated from the barrel channel through special vents. Cooling of the barrel is carried out using water that is circulated in the barrel jacket. Reloading of the automatic gun is pyrotechnic and manual (in the event a projectile becomes jammed). For the former, there are three pyrotechnic cartridges per automatic gun.

The "Tunguska's" chassis is a GM-352 that was manufactured by Minsk Tractor Plant. Right now Ulyanovsk Mechanical Plant makes it. A transloader vehicle on a KamAZ-43101 motor vehicle chassis is attached to each of the self-propelled air defense guns. It transports eight missiles and 32 boxes with projectiles for the automatic air defense guns, it has a crane, a machine for loading and to couple and uncouple cartridge belts, and radio communications equipment.

The "Tunguska" air defense mount is certainly an effective system. But you must keep in mind that it destroys only airborne targets. At the same time the United States, jointly with Switzerland, has developed the ADATS air defense-antitank missile system, the missiles of which can destroy aircraft at a distance of up to eight kilometers and at an altitude of five kilometers and any tanks at a distance of up to eight kilometers with a shaped charge-fragmentation warhead with a 900 mm armor-piercing capability. Missile guidance is by laser beam.

Tactical-Technical Specifications of the 2S6M air defense System

Target detection range, m	18,000
Target tracking range, m	13,000
Destruction range, m:	
Using 9M311 missiles	
Altitude	15-3,500
Range	2,500-8,000
Using 2A38 automatic guns	
Altitude	0-3,000
Range	200-4,000
Basic load:	
Missiles	8
30 mm projectiles	1,904
Combat effectiveness	
For 9M311 missiles	0.65
For 2A38 automatic guns	0.6
Weight of the system, loaded, kg	34,000
Crew, men	4
Speed along paved roads, kph	65
Air defense system reaction time, seconds	10

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Remote Mine-Laying System

94UM0168A Moscow VOYENNNYYE ZNANIYA
in Russian No 8, Aug 93 p 21

[Article by Colonel V. Belikov: "Remote Mine-Laying Systems"]

[Text] We discussed the GMZ tracked mine-layer in VOYENNNYYE ZNANIYA No 10, 1991.

Our readers, including Yu. Tarasov (Serpukhov), M. Feshchuk (Kamenets-Podolskiy), and others, request that we continue this topic.

Remote mine-laying systems are understood to be the sum total of landmines, aircraft, rocket-artillery and engineer systems that are used to scatter mines and deliver them to the minelaying area and to disperse them on terrain. Remote mine-laying systems have a morale and psychological impact on the enemy and are utilized to reduce the mobility of enemy troops, to inflict losses using landmines and to create favorable conditions for destruction by other weapons. Minefields, laid using remote mine-laying systems, are characterized by their great depth, by the absence of precise borders and by the placement of mines on the surface of the ground (snow). The laying of minefields is carried out, as a rule, during the course of combat operations or directly prior to their initiation while taking into account other obstacles, fire plans and the nature of the terrain.

At the present time, such systems as a universal mine-layer and portable minelaying system that have been accepted into the inventory in the 1990's have received widespread dissemination.

A ZiL-131 high off-road capability motor vehicle, in the bed of which are installed six canisters with 30 canister rounds armed with antitank or antipersonnel POM, PTM or PFM mines is used as the base vehicle for the universal mine-layer. Their number in the basic load depends on the purpose and design and totals from 180 to 11,520 canister rounds. The universal mine-layer conducts the laying of an antitank or antipersonnel minefield at a distance of 30-60 meters from itself at an average minelaying speed of 10-40 kilometers per hour [kph]. After laying one basic load, it can be reloaded by other crew personnel consisting of two men in 1.5-2 hours. One mine-layer using one basic load can lay a 3-row minefield from 150 to 1,500 meters long, depending on the type of mine used.

As a rule, it is utilized as a mobile minelaying detachment consisting of from 1-3 vehicles during the course of a battle. The mobile minelaying detachment commander receives the minelaying order by radio after which the vehicle advances to the minelaying point, moving along roads or virgin soil at an average speed of 10-25 kph. When approaching a line after the appropriate order, the operator selects the required direction of the canister and, utilizing the control panel located in the driver's cab, lays a one-, two-, or three-row minefield.

The **portable mine system** consists of a mount with a launch tube, a blasting machine, and a wire communications link. Canister rounds, armed with one of the types of antipersonnel mines, are loaded in the launch tube. Having installed the system on a trench parapet, you can lay an antipersonnel minefield with dimensions of 10X20(40) or 20X10 meters at a distance of 30-100 meters (depending on the type of mine). Scattered laying is conducted on the surface of the ground by firing the mines from the canister. The system is carried by a one-man crew, it weighs 2.63 kg, and preparation time for employment is less than five minutes.

The universal mine-layer and the portable minelaying system are employed for laying minefields that cover subunit positions, their flanks and the boundaries between them, fire positions, breaches in combat formations and paths in minefields and also for building up mined obstacles on armor approach routes.

In the missile troops and artillery, remote minelaying is carried out by **multiple rocket launcher systems**, the munitions of which are armed with landmines. Here a Ural-375 high off-road capability motor vehicle is used as a base vehicle. Sixteen launchers with projectiles equipped with one type of mine (PTM, PFM) are mounted on the Ural-375's bed. Their number in a single projectile depends on the type and totals from several dozen to several hundred units. The dimensions of a minefield which can be laid by one combat vehicle (one salvo) depend on the type of system and the firing range (from 8 to 35 km) and can occupy an area of from 24 to 81 hectares.

As a rule, multiple rocket launcher systems are enlisted to mine enemy targets that are located in the tactical depth and permit minefields to be laid with a significant depth and length directly at the targets.

Aircraft (fighters, fighter-bombers, and ground-attack aircraft) and helicopters are utilized in **aviation**. Bombers and fighter-bombers are enlisted to lay minefields in the operational depth and ground-attack aircraft—in the tactical depth. Canisters armed with cluster submunitions (cassettes) with antitank and antipersonnel mines are suspended from aircraft and helicopters.

The capabilities of aircraft to lay minefields depend on the type of aircraft, their combat operating range (from 100 to 500 km), optimal combat employment modes (a mining speed of 400-800 kph; an altitude of 50-200 meters), the number of suspended small canisters, and the quantity and type of mine employed.

Minelaying employing helicopters is conducted, as a rule, on friendly territory and in the depth of enemy combat formations while supporting combat operations of airborne assault units.

The capabilities of helicopters also depend on the type of helicopter (Mi-8, Mi-24), the minelaying system, type of mine, and the optimal combat employment mode (a

minelaying speed of 20-300 kph; an altitude of from 30 to 100 meters), and the expenditure of mines (mines per kilometer).

Thus, a combined-arms commander has an adequately broad selection of remote minelaying systems to support the combat operations of friendly units and formations.

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PZM-2 Regimental Earth-Mover

94UM0180A Moscow VOYENNY VESTNIK in Russian No 9, Sep 1993 p C3

[Unattributed article, under the rubric: "Engineer Munitions and Equipment Systems": "PZM-2"]

[Text] The PZM-2 Regimental Earth-Mover is designed for engineer preparation of terrain.

It consists of a wheeled prime mover, a bucket-less earthmoving tool and a winch.

Tactical-Technical Specifications

Dimensions of an excavated trench, meters:	
Depth	1.2
Width along the top:	
in thawed earth	0.9
in frozen earth	0.65
Width along the bottom	0.65
Dimensions of excavated foundation pits, meters:	
Width	2-3.5
Depth	up to 3
Productive capacity:	
While excavating foundation pits, m ³ per hour	100-140
While excavating trenches, meters per hour	up to 140
Transport speed, kph	up to 45
Weight, tonnes	12.8
Crew, men	2

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'Tochka' Tactical Mobile Missile

94UM0180B Moscow VOYENNY VESTNIK in Russian No 9, Sep 1993 p C4

[Unattributed article: "'Tochka' Missile System"]

[Text] The "Tochka" Missile System is designed to destroy nuclear weapons, missile launch and artillery firing positions, motorized infantry and armored vehicle subunits, airfields, command and control facilities, communications hubs and other point and small targets that are located in the tactical depth of enemy combat troop formations.

Tactical-Technical Specifications

Missile launch weight, kg	2,000
Warhead weight, kg	480
Firing range, km:	
Maximum	120
Minimum	15
Maximum travel speed, kph:	
On paved roads	60
On dirt roads	40
On unimproved terrain	15
In amphibious mode	10
Range, km	650
Transport speed, kph	up to 45
Crew, men	4

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Assignments Chief on State of Ground Troops' Officer Corps

94UM0175A Moscow VOYENNNY VESTNIK in Russian
No 9, Sep 1993 (signed to press 20 Aug 93) pp 15-16

[Report: "News in the Military Council of the Ground Troops"]

[Text] The Military Council of the Ground Troops discussed measures to improve work performance with the officer corps under a situation of reduction, and other organizational and establishment measures, in the Ground Troops. A report was delivered by Lieutenant-General S. Pshenichnikov, chief of the Personnel Training and Assignments Directorate of the Ground Troops. We are publishing a report on that address.

The degree to which the forces are manned with officers, their professional preparation, efficiency and sense of responsibility are the determining factors with respect to ensuring combat readiness and accomplishing the missions involved in training and indoctrinating the personnel. This is precisely why the upbringing and placement of military cadres is one of the most important areas of work for commanders and chiefs at all levels.

The changes occurring in the nation and in the armed forces, however, have produced major changes in the organization and the execution of the work performed with the officer corps and greatly exacerbated many personnel problems and service issues. More than 58,000 officers were discharged from the Ground Troops during the period 1990-1992, around 26,000 (44.9 percent) of them junior officers, an absolute majority of whom were below the age of 30. A total of 7,603 officers were released into the reserve during the first six months of 1993, including 4,082 (53.7 percent) junior officers. The number of young officers in the officer corps of the Ground Troops has dropped 9% during the past year. Together with the reduction in the number of military

school graduates entering the troops, this has created an adverse situation with respect to manning the positions of platoon commanders and other primary officer positions.

The seriousness of the problem lies in the fact that there are at the present time no realistic possibilities or sources for making up the shortage of officers to man the primary positions. The capacity of the Ground Troops' schools was calculated several years back based on a natural attrition of 4-5% of the officers, and at the present time it does not meet the requirements of the troops.

There is only one way out of the situation: to organize specific, focused work with civilian school graduates who have studied in the military departments. Most of them are now receiving a noncommitting diploma and, due to the drop in production, are having certain difficulties in finding jobs. This creates the essential basis for acquiring candidates for military service under contract. Success depends primarily upon our ability to get in touch with the people. First of all, it is necessary to proceed from the premise that as a rule the reserve officer signs a contract with the command element of the military unit at his place of residence. Upon signing a type-B or type-C contract, the officer may not be transferred to a different unit or garrison. At the same time, if the officer experiences housing difficulties, he can be provided with service housing or paid for the cost of renting.

When explaining the financial and material payments and benefits, it is essential to provide specific facts and figures to indicate not only the amount of pay for the position and officer's rank but also other advantages: The payment of a one-time monetary bonus for the year's results, material assistance, payment for travel on city and suburban transport, as well as travel to the place of leave and back, the value of the food ration and clothing allowance issued, special payment for housing and electricity, and so forth. With this approach there is a basis for comparison, and in view of the present social and economic difficulties this kind of specific work for selecting civilian VUZ graduates and signing contracts with them to serve in the army is producing good results.

Another aspect of the problem, which has to do with the service of the young officers, is the ability and the desire of commanders to work with them, to demonstrate concern for and give attention to their problems and requests. If the commander gets to know each newcomer and is able to deal with his needs not as a formality but sincerely and paternally, the officer will serve conscientiously, with desire and initiative. If not, we shall have another candidate for early release into the reserve. This is why it is essential to do everything possible properly—to receive and assign the young officers, to help them in their service development and with their material and personal matters.

Only by demonstrating real concern for retaining the army's young cadres and working actively to attract personnel for service under contract will we succeed in solving the problem of manning the primary officer positions.

Working with officers assigned to the jurisdiction of commanders in connection with the conduct of organizational and establishment measures continues to be the most important for the command element and personnel agencies. More than 13,000 officer positions will be cut this year under the plan of organizational measures in the Ground Troops. There are already around 6,300 supernumerary officers.

In view of the fact that the possibilities of the districts for placing officers, particularly older ones, have practically been exhausted, we must enhance control over the appointment of officers to positions and also accelerate the release into the reserve of officers who have served 20 or more years and are provided with housing.

The leading role in this matter must be taken both by commanders and personnel agencies and by the officers in their work with the personnel. It is their common mission not to evade acute questions but to answer them specifically and find solutions acceptable to the officers.

Focused individual work with those officers who have served out the established service terms based on age requires particular attention. It is mandatory for everyone to strictly observe the release plan and schedules for conducting talks and sending officers to the VVK [military medical board], because the prompt release of officers into the reserve is the main source of vacancies today. On the other hand, observance of the laws and formal send-offs of those being released into the reserve will demonstrate our concern for them, help them make the difficult transition in life and avert various complaints of violations of the procedure for release into the reserve.

By decision of the Commander-in-Chief of the Ground Troops, all officers who have served out the established period at remote sites or in regions with difficult conditions and are included in the replacement plan will be replaced. No changes are permitted in the replacement plans. A directive to that effect has been sent to the district personnel agencies.

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Weapon Training: Problems of Troop Training

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No 11, Nov 93 (signed to press 20 Sep 93) pp 69-73

[Article by Colonel V. Vasilyev, chief of Weapon Training and Combat Vehicle Driving Department of Ground Troops Main Combat Training Directorate, and Colonel V. Shevchuk, deputy department chief]

[Text] Fire effectiveness often has a greater influence on the outcome of a battle than the number and outfitting of troops. Under difficult situational conditions fire often

is not only the swiftest, but also the only means of altering a situation in one's favor. In connection with the increased role of fire in modern combined-arms battle, the importance of weapon training also is growing. Firm skills in functioning at the weapons, preempting the enemy in opening fire, and hitting the target with the first round are developed in the process of weapon training. In addition, commanders master the art of fire control in the most diverse situations which form on the battlefield.

The existing level of weapon training today causes certain concern, since many specialists believe it does not meet the demands being placed on it. Over the past five years the state of personnel training in a number of units and formations has not exceeded the "satisfactory" mark, and problems which have built up during these years are being solved late and not always fully. The shortage of personnel in subunits, the increased number of details and fatigue duties, and the performance of other measures unusual for the army entailed a disruption of scheduled classes and drills, which of course was not slow in telling on the quality of the training process as a whole.

Meanwhile, there is a way out even from that seemingly very complicated situation. In our view, thorough planning which takes into account practical reality, constant improvement in the quality of weapon training classes, their integration with other subjects, wide use of training equipment, and officers' high proficiency in weapon and methods constitute that very reserve by which it is possible to achieve a good subunit training level in short time periods. And this has been proven. For example, the subordinates of Captain V. Anufriyev (Volga Military District) performed an exercise for an outstanding grade in a performance evaluation class. Twelve of the 17 persons who fired received the highest mark. As noted in the critique, the thorough planning of weapon training served as a guarantee of quality performance of its tasks in the subunit. At the same time, although this planning does have certain features, it is not an independent process, but an inalienable part of the planning of combat training as a whole.

Combat training experience shows that where commanders give serious attention to and take a personal part in planning, then classes are held in prescribed time periods and with appropriate quality. Just what must be done to improve planning quality? Inasmuch as inspection results in the troops show that some officers experience certain difficulties here, it makes sense to take a look at the commander's work in more detail.

We should begin with a study of guidance documents. It is important to determine the time periods for familiarizing subordinates with them and make changes to commander training and combat training programs suggested by the leadership. Then we must answer a few questions, and specifically, when and to what extent to plan weapon drills and exercises in firing all kinds of weapons and throwing hand grenades; when to hold fire

control drills; what questions should be included in the schedule of officer and NCO assemblies; when to hold methods conferences and meetings to exchange experience of the best gunnery specialists; what training films to show trainees; when to plan contests for title of best specialist, crew and platoon and when to hold classes for improving or confirming a class rating; in what time periods to organize training for mastering techniques and methods of employing all squad weapons in modern battle; what amount of combat training vehicles to allocate for performing gunnery exercises; how to distribute ammunition, simulation devices and vehicle resources and in what amounts; in what time periods to hold demonstration and instructional methods classes and on what topic; when to hold performance evaluation classes to determine the level of weapon proficiency; and what measures to provide for to ensure safety precautions in classes. And all these questions should be resolved taking account of trainee categories.

Additionally the following are determined in the course of studying and clarifying initial data: The quality of program fulfillment; the status of weapon proficiency of officers and subunits, again by categories of servicemen taking into account data from the latest performance evaluation classes and the end-of-training-period performance evaluation; the training facility capabilities; and the tasking function and strength level of units and subunits. A graphically formalized decision reflecting the measures enumerated and the time periods in which they are to be accomplished should be the result of a commander's work of planning weapon training. In addition, the rehearsal of topics, conduct of weapon drills, and performance of gunnery and fire control exercises must be tied in closely in content and sequence with tactical training and with time periods for teamwork training of subunits.

In our view, such a work sequence of a commander at any level will make it possible to take the fullest account of conditions under which classes will be held in subunits and will ensure quality performance of training tasks.

Combat training programs of motorized rifle and tank subunits set aside 256 hours per year for the activities enumerated, constituting 25 percent of total training time. Of this, up to 10 percent is allocated for theoretical classes and 90 percent for weapon drills and firing. In following a methods sequence and systematic conduct of drills and firing, all this will permit maintaining and upgrading the level of servicemen's weapon proficiency if they are not used to perform any kind of activities to the detriment of combat training.

It would appear that the contract system of Armed Forces manpower acquisition will require an increased number of training days and consequently also hours for weapon training. Training in combat units will be presented in the form of individual and group training. During individual training specialists improve personal skills in actions at the weapons and in conducting fire, and in group training they participate in squad (crew)

and platoon teamwork training. Time periods of a particular kind of training must be precisely distributed in the programs. The following is the basis of individual training in the U.S. Army: Weapon training 216 hours (37.5 percent), physical training 128 hours, airborne training 108 hours. Subunit teamwork training includes performance of integrated training missions, where 192 hours are set aside for weapon training.

It is common knowledge that weapon drills and firing exercises are the basic method of achieving high firing results. At ranges and in fighting vehicle gunnery training facilities the soldiers gain, reinforce and improve knowledge and skills in functioning at the weapons; reconnoitering targets; determining their nature, importance and distances; giving target designations; firing against different targets day and night by all methods; and remedying stoppages.

Research here and abroad shows that the number and duration of drills and firings should be within certain limits. Thus, if they are conducted too often and for too long a time, people become fatigued and apathy appears as a result. Their further continuation is only a vain waste of material resources and time. The optimum, practically tested option is three weapon drills and firings per week (one of them at night) lasting no more than 3 hours. Thus, 12 weapon drills and firings may be held in a month, and it is advisable to rehearse the practice and test firing exercises day and night at least once.

Consequently, the gap between practical classes should not exceed three days. But combat training programs provide that the cumulative number of weapon drills and firings is at least eight per month, with up to a four-day break allowed between them, and even longer for subunits working eight training days. Preparatory measures (before the beginning of winter and summer training periods) interrupt the training process by another one and one-half to two months, which of course has a very negative effect on preparedness of gun crew members. These measures are dictated above all by the existing manpower acquisition system and by the scope of administrative-economic functions assigned to each military unit. The Ground Troops Main Combat Training Directorate is forced simply to determine the minimum permissible number of weapon drills and firings to maintain the minimum skills necessary in soldiers' performance of functional duties. But with the transition to an 18-month term of service and to contract service, such an approach to determining the scope of servicemen's knowledge, abilities and skills will hardly prove acceptable.

The procedure and content of personnel training in skillful, effective use of authorized weapons and hand grenades in battle are spelled out by the Gunnery Course. Motorized rifle and tank subunits have been guided for eight years in weapon training by the unified "Kurs strelb KS SO, BM i T SV-84" [1984 Ground Troops Small Arms, Fighting Vehicle and Tank Gunnery Course].

Table 1 - Weapon

Type of Training Equipment		Mod 155	Mod 166	Mod 434	Mod 172	Mod 184
Classroom	Equipment Sets for Studying Gunnery Procedures			KOPT-4	KOPT-3	
	Specialized Gunner (Commander and Operator) Simulators	TNT-2M, 9F61, 8M3	TNT-2M, 9F61, 8M3	TNT-4		9F61, 8M3
	Integrated Gunner (Operator) Simulators	TPNT-2M	TPNT-2M	TPNT-4, 2Kb49, 2Kb47	TNT-3	
	Integrated Commander and Gunner (Operator) Simulators					
Field	Fire Result Monitor Sets	KPK-234U PU	KPK-234U PU	KPK-234U PU	KPK-234U PU	KPK-234U PU
	Specialized Gunner (Operator) Simulators	9F61, 8M3	9F61, 8M3			
	Integrated Commander and Gunner (Operator) Simulators	TOPT-B			TOPT-3	

Note: Boldface indicates training equipment removed from production

Of course, in these years it has become somewhat outdated and no longer fully meets the requirements for training servicemen. Recently the Ground Troops Main Combat Training Directorate together with academies and military schools began work on a Gunnery Course which takes account of changes in manpower acquisition and in the procedure for performance of duty, and also the conditions under which subunits will have to perform actual combat and training missions.¹

Officers from the troops often ask the question: why is so little ammunition issued for mastering gunnery? And they compare ammunition issue standards for combat training in armies of NATO countries and of Russia. We are speaking chiefly only about weapon training without taking into account ammunition expenditure in exercises.

Unfortunately the comparisons in fact are clearly not in our favor. According to foreign press data, NATO armies allocate an average of 50-60 rounds per tank, 2-3 missiles per ATGM launcher, 4 grenades per antitank grenade launcher, and 60 cartridges per IFV per year. Moreover, the bulk of exercises are performed with all types of authorized ammunition in the vehicle's basic unit of fire.

We cannot allow ourselves anything of the sort because of certain economic difficulties, and the training content has no exercises using all types of ammunition. There is no question that this is a substantial drawback in training tankers. At the same time, standards for issuing material resources for combat training also are being reduced in NATO armies. While up to 110 rounds were issued per tank per year back in the 1970's, their number now has been cut almost in half and the cost of ammunition has grown considerably. Several years ago the cost of one artillery round for the standardized 105-mm gun of M60A1, Leopard 1, AMX-30 and other tanks was figured at \$200-300. One round from the Leopard 2 and M1 tanks costs taxpayers \$1,200-2,000. Therefore a new criterion for evaluating training quality—cost-effectiveness—has moved to the foreground abroad.

And the "range rounds" that are lacking are fully compensated for by the most modern simulators.

Attaining high results in gunnery training using only costly combat and combat-training vehicles is unjustified. Training equipment capabilities must be fully used to train specialists in the troops and military educational institutions. It permits holding classes under field conditions and in training classrooms more clearly and understandably, monitoring subordinates' actions, identifying mistakes promptly, determining the reasons and seeing to their elimination. Supplementary simulator drills shorten breaks between practical classes and help preserve and improve acquired skills. In addition, with a limitation on fuel and lubricant deliveries and a reduction in numbers and size of training ranges, the training equipment relieves the acuteness of many problems.

The troops have several types of training equipment as of today (Table 1). Unfortunately, some already are obsolete and need replacing with more modern models. Production of such articles has been stopped, and a new generation of simulators with their principle of operation based on personal computers has begun to come into units. But here, too, we observe a multitude of unresolved problems, about which, by the way, VOYENNY VESTNIK carried on a detailed discussion last year and the year before last.

On the whole, however, the concept of developing and building a training equipment system for weapon training has changed substantially (Table 2). Only three types remain from the past diversity of simulators: Training equipment intended for basic training of gun crew members (mock fighting compartments of simulated vehicles with an automated training system); classroom simulators for improving skills in functioning at the weapons and in firing (TKNT-4U and TKNO-9 integrated tank and IFV commander and gunner simulators); and field simulators (Geofil, Konotop, Zaplatka) for performing Gunnery Course exercises.

Training Equipment (Continued)

Mod 437, Mod 219	Mod 219AS	Mod 188	Mod 765	Mod 675	Mod 688	ATGM Launcher
KOPT-4						
TNT-4, 9F6, BM	9F6, BM1		TNO-7M, 9F66	9F619, 9F655		9F640, 2U451
TPNT-4, 2Kb49, 2Kb47			TNO-765P	TNO-675		
TKNT-4						
KPK-234U, PU	KPK-324U, PU		KPK-BMP, PU-BMP	KPK-675, 1U23, KOP-675		
9F6, BM	9F6, BM1		9F66	9F619		9F640, 2U45
VTN-4, 2Kb29-1, 2Kb29			TOP-7	TOP-675		

Table 2 - Advanced Weapon Training Equipment

	Type Training Equipment	Mod 184	Mod 188	Mod 478	Mod 688	Small Arms
Classroom	Specialized Commander and Gunner Simulators (for basic training)	UBO-184 with ASOK (not further expanded, possibly commander's automated training system)		UBO-478 with ASOK	UBO-688 with ASOK	
	Integrated Commander and Gunner Simulators (for improving skills)	TKNT-3B	TNKT-188	TNKT-4U	TKNO-9	Inhibitor
Field	Integrated Commander and Gunner Simulators (for performing Gunnery Course exercises)	Geofil-S (2Kb58) (2X58)	Geofil-S (2Kb67) (2X67)	Konotop (2Kb62) (2X62)	Zapiska	

One of the most important factors in improving weapon proficiency is a good physical facility. Range equipment of troop firing ranges, moving-target gunnery ranges, and fighting vehicle gunnery training facilities support only individual training. This does not allow creating a varied target situation, let alone registering exercise parameters and trainee actions. For example, there are no laterally moving targets for firing a gun with a subcaliber tube. There also are none for firing the authorized round. Moving targets displace only at identical speed. It is possible to register hits only on four targets, and the time for firing each round is not noted. Group training of crew, squad and platoon is limited for these reasons and is insufficiently effective. During a training period there is one squad and platoon field firing in motorized rifle subunits and only a platoon field firing in tank companies.

Such training practice does not produce the desired results in live-fire exercises because there is no system for group training in conducting fire as crews, squads and platoons in weapon training classes. On the other hand, in the majority of cases moving-target gunnery ranges, fighting vehicle gunnery training facilities and troop firing ranges are set up on unsuitable land, because of which it is impossible to take full advantage of all

combat qualities of new models of weapons and equipment when they become operational.

Another problem arises here—upkeep and servicing of training facility installations. For example, soldiers must be diverted on the eve of classes to clear moving-target roads and restore targets and equipment. But the fact is, we have begun shifting to contract service. It is apropos to ask who will perform the preparatory work. The question of tables of organization and technical outfitting of ranges, training fields and simulator complexes continues to be very problematical. It will become essentially impossible to use so-called non-TOE specialists from combat units to service training equipment. It is fully obvious that sooner or later it will be necessary to resolve this long-standing problem.

It is no secret that whatever the level of officers' weapon proficiency, that is the quality of the personnel's weapon training. Therefore special attention must constantly be devoted to the training of officers, especially platoon and company commanders, for only a well trained commander is capable of really teaching his subordinates something.

It must be admitted that here, too, not everything is well. Despite a sufficient amount of allocated ammunition,

preparedness of platoon and company level officers leaves much to be desired. Evidently considering the experience gained in schools to be sufficient, some scorn preparatory exercises and, taking advantage of the connivance of senior officers, also often avoid performing practice and even test firings. And superiors in turn check officers' preparedness only occasionally and do not analyze their state of training. As a result, concern for professional suitability becomes the lot of the officers themselves.

Requirements of prewar courses, where officer weapon training was placed at the proper level, are instructive in this respect. In particular, at that time it was prescribed that command personnel (up to and including the regimental commander) personally master weapons in the subunit and unit inventory. Each year all command personnel were graded in firing any model of small arm.

The problem of officer professionalism probably lies deeper. We believe that military school programs do not provide necessary skills for graduates to train subordinates. The fact is, the basis of training always was considered to be the teacher's graphic example in performing a particular procedure, and the system of commanders' methods training that is in effect is aimed at upgrading their skills. But the question arises: What is there to upgrade if they do not have them?

One would like to believe that the questions raised and suggestions expressed will be of certain interest to the readers, although, of course, they are not indisputable. Therefore we invite officers to express their opinions on the topic broached. Many problems have piled up and we all have to solve them.

Footnotes

1. Dear readers! Send your suggestions and wishes for improving the Gunnery Course to the following address: 103160, Moscow, K-160, Ground Troops Main Combat Training Directorate.

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AIR, AIR DEFENSE FORCES

Kornukov Briefs Moscow Air Defense Status

944K0631A Moscow ARGUMENTY I FAKTY in Russian No 4, Jan 94 p 7

[Interview with Colonel-General Anatoliy Kornukov, commander of the Moscow Air Defense District, by Valeriy Buldakov; place and date not given: "The Duty of the Moscow Air Defense District. R15 Billion for Defense Enterprises: Rust Will Fly No More"]

[Text] *Today every child knows that there are certain protective rings around Moscow, but what are these rings? M. Rust's flight along the route FRG-Red Square is well remembered. There were no rings protecting the city. What kind of defense system is this? Our correspondent*

discusses this with the commander of the Moscow Air Defense District, Colonel-General Anatoliy Kornukov.

[Kornukov] Rings around the capital—this is too simplistic an idea of the air defense structure. Troops of the Moscow Air Defense District are deployed over a territory of 24 oblasts of Russia and they monitor the air space over an area of 1.3 million square kilometers. Large and small units of the district protect 141 facilities, including 59 military ones, 14—with radiation and nuclear hazards, 17—of high level state administration, and 11 large cities and industrial centers.

As for the immediate defense of Moscow, I would not call this system rings. It is simply that at the beginning of the Cold War, when missiles for delivering nuclear weapons were created in the West, we began to deploy our air defense missile units around the city in two echelons. Incidentally, L. Beria was the first to work on the new defense system. At that time we began to arm ourselves with S-25 air defense missile systems. For those times this was a high class (the technical equipment served us for 30 years after that). Regiments equipped with these systems were deployed in such a way that Moscow was practically invulnerable.

The defense included one external ring and one internal one. The former was located 100-120 kilometers from Moscow, and the latter—50-70 kilometers. That is the way it was after that as well.

[Buldakov] But what changes have taken place?

[Kornukov] By the end of the eighties a decision was made to create a new system. Now we can wage a controlled air defense missile battle with all flight equipment attacking both from the air and from space. Therefore the air defense system itself will soon be called an air-space system. The basis of this system is the S-300 air defense missile complex with various modifications. We have practically finished rearming ourselves. Field trials were held in 1993: More than 100 aircraft were "launched" over Moscow and all of them entered the capital zone at the same time. The air defense battle lasted a couple of minutes, and all the targets were conventionally fired on and destroyed. The new air defense missile complex can engage in combat with air attack equipment created under the Stealth program, that is, with the so-called "Stealth aircraft," for example, the familiar F-117 fighter-bombers. Using Moscow's air defense defense system it is possible to fire on 500 aircraft of various classes at the same time and destroy them simultaneously with one volley. These weapons are every bit as good, and in terms of many parameters (for example, the target location system) they surpass the renowned American Patriot complex, which proved itself so well in Desert Storm operations.

[Buldakov] Are there still systems in the world for defense of large metropolitan areas like the Moscow system?

[Kornukov] Like that—no. That is the only system of its kind. Without false modesty, it is the pride of our scientists. So many billions were invested in it...but it was worth it. One can say that nothing of the kind has been created around St. Petersburg. As for other large cities of Russia and also important facilities, they are protected in the overall air defense defense system. It is somewhat different from, say, the American one. The United States regards the entire territory of its country as an especially important object. Washington, for example, has no special protection systems. The states place their hopes in the Air Force and Navy in remote regions. Russia has a territory almost three times as large as that of the United States and we do not have the forces or money to arrange defense this way...

[Buldakov] What is the main thing state money is spent on in your department?

[Kornukov] In keeping with the new military doctrine, we are relying not on the quantity but on the quality of new military equipment. For example, we are replacing the obsolete MiG-23, SU-15, and MiG-25 aircraft which cannot successfully resist cruise missiles. And the SU-27 and MiG-31 are quite excellent at this. At the present time 95 percent of the air defense missile forces are equipped with various modifications of the S-300 arms system.

New equipment requires colossal expenditures. In order to guarantee to down one cruise missile it is necessary to launch at least two to four of our own from the S-300 complex. All this plus the work of the people amounts to approximately R320 million. One hour of flight of a modern fighter, waging air combat and destroying three or four targets, costs more than R7 million. In 1993, 40 percent of the missile units went through training with weapons fire and 70 percent of the fighter aircraft regiments went through the testing ground. The marks were high: Of the 62 targets on the testing ground, 59 were destroyed. So I can say with good reason that the skies over Moscow are protected.

[Buldakov] From whom? Are the Western countries still considered to be our main potential enemies? How do the Russian air defense defense troops feel about their colleagues from the former Union republics?

[Kornukov] As for the West, not all of the missiles that were aimed at Moscow have been aimed somewhere else. Well, we are working successfully with air defense defense forces, for example, of Ukraine and Belarus: We notify one another about aircraft that are coming from our territories. We are very sensitive to aircraft that carelessly come without notification. The Baltic republics are frequently guilty of this. Sometimes we force the aircraft to return to the airfield from which it took off. But we hope that we will never use weapons against our former friends in the Union. It is impossible to allow a free-for-all in the sky. We must agree on "corridors." Soon, when the Western Group of Forces takes its fighters up, we will especially need these corridors.

[Buldakov] And, finally, a question inevitably arises as soon as the topic comes around to modern weapons. How safe are they from accidents? Are we sure some untrained soldier will not press the wrong button?

[Kornukov] We have never placed ignoramuses in front of the radar screen or behind the wheel of those immense missile transporters. Only trained officers are seated at the "buttons." At the airfields the equipment is again serviced by officers and warrant officers. Basically we do not have enough enlisted men and noncommissioned officers. And in the last fall-winter callup the plan was fulfilled by only 8 percent. But I think that in two or three years we will eliminate such things as having majors stand guard or be in a detachment for loading coal. There are 2,400 military servicemen on duty in the air defense defense system 24 hours a day. More than 10,000 people are serving under contract (more than half of them are women). There are officer teams capable of waging combat without enlisted men and noncommissioned officers. The wages of a fighter pilot (captain, major) are R150,000-160,000 plus 30 percent of the salary for special duty. And food is free. Judge for yourself how much that is when the salary of our district commander when translated into dollars is barely half as much as that of a sergeant in the U.S. Air Force.

Military Airfields Falling Into Disrepair

*PM0302165594 Moscow KRSNAYA ZVEZDA
in Russian 29 Jan 94 p 3*

[Colonel Aleksandr Andryushkov article under "Topical Subject" rubric: "Runway"]

[Text] The situation now developing in the Air Force is such that, even given combat-ready aircrew and a fleet of serviceable aircraft, they might never get into the sky.

There is one reason: Every day airfields are becoming increasingly unfit for use. Moreover, the entire range of airfield administration and support services needs emergency aid.

A modern airfield, for fighter aircraft for example, consists of tens of hectares of artificial surfaces—the runway, taxiways, and flight line parking spaces. In addition, it has around 100 various facilities and many kilometers of special-purpose supply lines, pipe, and ducts above and below ground.

"Russia's airfield network," Major General Vladimir Yermakov, deputy chief of the Air Force Main Engineering Directorate, says, "is part of the country's overall infrastructure." The Union's disintegration also led to the network's disintegration, and has faced us with a number of very complex problems associated with the combat readiness of all Armed Forces branches and the state's defense capability as a whole. Before this our attention was concentrated on the western direction, where powerful air combat forces were stationed. They

had high-quality, well-equipped airfields with concrete surfaces, from which all types of heavy bomber could operate.

Many aviation units have now been withdrawn to Russia with their combat equipment. But an airfield is not an aircraft—you cannot lift it into the air in order to rebase it in the Moscow region or beyond the Urals. Now the well-equipped airfields belong to Ukraine, Belarus, and the Baltic countries. After the "carve-up" Russia was left with 100 artificial-surface airfields which are now forming the basic foundation of the Russian Air Force, Air Defense Forces aviation, and other branches of the Armed Forces. Aircraft use of many of these has doubled or tripled in the last few years. Russia is in no position to construct new ones. A modern airfield complex costs in the region of 250-300 billion rubles [R]. Too expensive an amusement for the country's unstable economy.

"We have been forced," Vladimir Nikolayevich says, "to adapt existing airfields for heavy aircraft, but most airfields are not suitable for this. As a result of the very first flights runway and taxiway surfaces were put out of action."

Our Information

Around 70 percent of Russia's airfields are constructed of slabs like SAS (PAG) (smooth airfield slab). The "life" of such a slab is 25 years. When used by modern aircraft the slab's service life is reduced to 10-12 years. Previously one smooth airfield slab cost R175. The cost is still 175,000. The Air Force has no money, and this year a request was made for only 5.8 batches of slabs—and 2.9 were received.

What could this situation lead to? To the impossibility of carrying out routine airfield maintenance according to the schedule: One airfield is repaired and the rest are in operation. But if repairs are not carried out airfields will go out of action en masse. Repairing several airfields in a large strategic formation all at one time would mean failing to ensure the formation's combat readiness.

But even the availability of slabs does not solve airfields' problems. Smooth airfield slabs have their weak spot—the joints. A standard airfield runway has around 100 km of such joints. In order to ensure flight safety, to prevent water from finding its way beneath the pavement, and to prevent foreign bodies from getting into aircraft engines, the joints are filled with special bitumen mastic, which heavy aircraft cause to be extruded during takeoff and landing.

Thus, Air Force personnel are not in a position to construct new airfields with solid reinforced concrete surfaces. To reconstruct existing airfields would also involve an immense amount of work. Thus, maybe the solution is to use airfields competently and carefully look after them using equipment and facilities?

"Do not press a sore point," Gen. Yermakov says. "The complex task of operational and routine maintenance of airfields is the duty of specialists in airfield operations

subunits." They monitor the condition of runway, taxiway, and flight line parking space surfaces. It is their job to mark them, clear snow and ice-glaze from them, and repair them. These subunits have special airfield operations equipment at their disposal. In the Air Force as a whole slightly over 60 percent of units are equipped with it. For a long time now we have not been writing off vacuum cleaning vehicles ("dustbusters"), heating vehicles, rotary screw snowplows, and combination washing and watering vehicles which have exceeded their service life. We cannibalize one vehicle out of two or three.

Deliveries from industry of spare parts and new vehicles have almost stopped. During the entire year the Air Force did not receive a single combination washing and watering or heating vehicle. But these are the main workhorses on an airfield, especially in winter. Day and night they crawl around it, getting it in order. Because of the equipment shortage the Air Force, as the general client for such equipment, has not delivered a single item for Air Defense aviation, the Strategic Rocket Forces, or the Navy.

So it turns out that the current winter is a survival test for airfield personnel. Almost all Russian airfields are located in severe climatic conditions. Airfield operations equipment must therefore be delivered to units under state order conditions.

Unfortunately, whatever problem you take its solution is held up by finance. Air Force specialists have proposals on methods of obtaining funds. One of them is to lease out unused airfield facilities and charge other departments for using military airfields and aircraft parking spaces. Nobody is banning the idea, but nobody is supporting it either. This is at a time when military aircrew at other people's airfields are being robbed blind without compunction. Our civilian colleagues have gotten this mechanism all worked out and it is yielding profit, which enables them to maintain the airfield administration and support services in working condition.

The situation regarding the Russia's airfield administration and support services deteriorates every year. But the Air Force command does not sit idly waiting for manna from heaven.

Our Information

In September 1992 the Air Force High Command devised a plan to improve the Air Force's basing and rear services system, bearing in mind the concept for developing them until 2000. It was considered by the Russian Federation Defense Ministry and approved on 10 July 1993. The Air Force Commander-in-Chief and the high commands of other branches of the Armed Forces which have aviation were instructed to implement a plan to reconstruct and equip the Russian airfield network. Through the efforts of Air Force airfield engineer battalions 564,000 square meters of artificial surfaces have already been laid (around 50 percent of them at airfields being used for

troop withdrawal), and selective repairs to runways, taxiways, and flight line parking spaces have been carried out.

In short, by saving every ruble military aviation personnel are trying to maintain their airfield administration and support services at a state of combat readiness. But the Air Force cannot solve this problem without support at the state level.

NAVAL FORCES

Automatic 76.2 mm AK-176 Gun Turret

94UM0171A Moscow VOYENNYE ZNANIYA in Russian No 7, Jul 93 p 14

[Article by engineer A. Shirokorad: "Automatic Ship Mounts"]

[Excerpt] Powerful rapid-fire weapons were required to arm small ships at the end of the 1960's. A decision was made to develop light 57-mm and 76.2-mm single-gun mounts. The designs of these automatic mounts were developed at the KB [design bureau] of a machine building plant (since 1970—"Burevestnik" TsNII [Central Scientific Research Institute] and they also manufactured experimental models of automatic mounts there. The 57-mm mount received the model number A-220 and the 76-mm mount received the model number A-221.

Ship tests of the A-221 were conducted from 23 through 30 November 1979 in the area of Baltiysk Naval Base on an R-5 design 1241-I missile boat. Based upon their results, the automatic mount was recommended for acceptance into the inventory which occurred on 22 June 1979. The A-221 automatic mount received the designation "AK-176". As for the A-220 57-mm automatic mount, it successfully underwent ship tests in 1977-1978 on a design 205PE boat but only that design was accepted into the inventory.

The barrel of the AK-176 was designed under the ballistics of the AK-726. The automatic mount's operating principles and the barrel's internal mechanism are primarily the same. In contrast to the AK-726, continuous external cooling of the barrel by passing seawater between the barrel jacket and monobloc has been introduced. Feeding is continuous from two sides and without cartridge holders. The basic load (152 projectiles) is located vertically on lower platform transporters. Loading time of the 152 projectiles by a crew of four men totals six minutes.

Shells are fed from two sides and therefore all of the feed system's mechanisms are divided into two identical

groups—right and left. They are linked into a single kinematic chain and have a drive from a common electric motor. The system itself consists a deck upon which are located two horizontal transporters (left and right) with cartridge holders for 76 shells each, two chain elevators with receivers and two pendulums with drives. From the transporters, piston rods feed the shells into the vertical elevators. The pendulum transfers the cartridge from the elevators into the receiver of the tipping part.

Guidance of the automatic gun is carried out: automatically—using the servo drive from the "Vympel-221" Radar; semiautomatically—from the "Kondensor-221" gunsight; and, by manual drive. Two men are in the turret during firing: The automatic gun chief and the artillery observer who carries out semiautomatic laying in the event the PUS [Fire Control Direction] malfunctions. A bulkhead separates the local command post from the remaining portion of the automatic gun.

At the present time, 76 mm automatic guns have found widespread use in the majority of the world's navies.

Tactical-Technical Specifications of USSR's AK-176 Shipborne Automatic Gun

Year accepted into the inventory	1979
Number of barrels	1
Caliber, mm	76.2
Barrel length, calibers	59
Elevation angle, degrees	-10, +80
Traverse angle, degrees	+/- 168
Elevation speed, degrees per second	30
Traverse speed, degrees per second	35
Weight of the tipping parts, kg	2,796
Weight of the automatic gun without the crew and basic load, kg	approximately 10,100
Rate of fire, rounds per minute	120-130
Length of continuous burst	up to 70
Basic load ready for firing, units	152
Automatic gun crew, men	2
Projectile weight, kg	5.9
Muzzle velocity, meters per second	980
Firing range, km	15.7
Ceiling, km	13.0

Note: The AK-176 has two types of projectiles—antiaircraft and high-explosive-fragmentation. They are distinguished only by their fuzes: The antiaircraft projectile has a radar fuze and the high-explosive-fragmentation projectile has a contact percussion fuze.

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Baltiysk Continues Work on Cruiser 'Petr Velikiy'*94UM0169B Moscow KRASNAYA ZVEZDA in Russian
19 Jan 94 p 1*

[Article by the Russian Federation Ministry of Defense Information and Press Directorate: "Construction of a New Cruiser"]

[Text] Construction of the Heavy Missile Cruiser "Petr Velikiy" is continuing at the Baltiysk Plant in St. Petersburg despite serious financing problems (it was erroneously called a heavy aircraft-carrying cruiser in some articles). Construction of the cruiser is one of the priorities of the Russian Federation Ministry of Defense shipbuilding program and they plan to complete it at the end of this year.

REAR SERVICES, SUPPORT ISSUES**Civil Defense/Education Order on Student Training***94UM0167B Moscow VOYENNYE ZNANIYA in Russian
No 9, Sep 93 (signed to press 27 Jul 93) pp 20-21*

[Order: "On the Organization of Training of Students in the 'Safety Principles' Course in Educational Institutions"]

[Text] Official Department

Ministry of Education of the Russian Federation, State Committee of the Russian Federation for Civil Defense, Emergencies, and Mopping Up in the Aftermath of Natural Disasters

ORDER dated 3-16-93, Moscow, No 66/85

On the Organization of Training of Students in the "Safety Principles" Course in Educational Institutions

The decree of the Government of the Russian Federation of 18 April 1992 No 261 "On the Creation of a Russian System of Prevention of and Operations in Emergencies" defined a uniform state policy with respect to prevention of emergencies and mopping up in the aftermath of emergency situations, and protection of peoples' lives and health, of material and cultural values, and of the environment should they occur in peacetime or in war.

To implement this decree, WE ORDER:

1. The organs of control of education of the republics in the Russian Federation, krays, autonomous formations, and the cities of Moscow and St. Petersburg to take additional measures to organize study of the "safety principles" (OBZh) course in general educational institutions and institutions of primary and secondary professional education, which was introduced by the Order of the Ministry of Education of the USSR No 160 dated 27 May 1991.
2. The chiefs of the Main Directorates for the Development of General Secondary Education (M.R. Leontyev), for Pedagogical Education (M.N. Kostikov), and for Professional Education (A.V. Yelistratov), the

chief of the Economic Planning Directorate (Z.I. Filomonova), the chief of the Special Department of the Russian Ministry of Education (M.P. Frolov) and the chief of the Directorate for Civil Defense, GKChS [Main Committee for Emergency Situations] of Russia (Yu.N. Klimenko):

- 2.1. Before 1 December 1993, must organize development of programs for the OBZh program for different types of educational institutions, providing for inclusion of the necessary minimum educational standard and teaching aids.
- 2.2. Must approve pay-rates and qualifications, in coordination with the Ministry of Labor of the Russian Federation, for the position of "safety principles" teacher/organizer of educational institutions.
- 2.3. Before 1 September 1993, must devise sample teaching plans and programs for training and retraining of specialists in the OBZh course in higher pedagogical educational institutions and teacher-improvement institutes (for enhancing the qualifications of education workers).
3. That classes in the OBZh course in general educational institutions (from grade 2 to grade 11) and in institutions of primary and secondary professional education be assigned to the "safety principles" teacher/organizer.
4. That for the "safety principles" teacher/organizers:
 - 4.1. Pay for the position is to be paid for 36 hours of work per week with allowance for teaching work directly in the OBZh course in the amount of 9 hours per week (360 hours per year).

When the volume of teaching work in the OBZh course is less than 5 hours per week (180 hours per year), payment is to be made in the amount of one half the duty pay, with a work week duration of 18 hours.
 - 4.2. For teaching work in the OBZh course of more than 9 hours per week (360 hours per year), and also for teaching work in other subjects, supplemental pay is to be provided in accordance with the procedures and terms established for teachers and instructors.
 - 4.3. Vacation is granted in the amount of 48 working days.
 - 4.4. Work time in specialty (including for payment of hours of teaching work in the OBZh course of more than the established norm, and payment of teachers and instructors recruited to teach the OBZh course) includes, besides the work in this position, the time of work (service) corresponding to the profile of the subject taught.

5. To the rectors of pedagogical universities (institutions), as of 1 Sep 1993, that they continue to train OBZh teachers in military departments.
6. To the directors of institutes for improvement of teachers, and to the rectors of institutes for skill enhancement of education workers, starting in the 1993/94 academic year, that they organize skill-enhancement and retraining of specialists of the OBZh course.
7. To civil defense staffs, that they provide methodological and practical assistance to educational institutions to implement training in the OBZh course, and also in the preparation and retraining of "safety principles" teacher/organizers. That they send the teachers of civil defense courses and specialists to educational institutions so that they may train students of lower and higher levels in the most complex topics demanding special knowledge, and provide them with practical and methodological assistance.
8. To the civil defense staffs, that they implement the training of "safety principles" teacher/organizers, as well as recruited teachers and other pedagogical workers for teaching OBZh in civil defense courses, as a rule during holidays at two-week assemblies. To the leaders of educational institutions, that they ensure that the "safety principles" teacher/organizers and teachers conducting classes in the OBZh course be sent to the designated assemblies.
9. Oversight of implementation of this order is the task of the Assistant Minister of Education of Russia, A.G. Asmolov, and the Assistant Chairman of the GKChS of Russia, N.I. Burdakov.

Minister of Education of the Russian Federation Ye.V. Tkachenko

Chairman of the State Committee of the Russian Federation for Civil Defense, Emergencies, and Mopping Up After Natural Disasters, S.K. Shoygu

"SAFETY PRINCIPLES" Teacher/organizer (at educational institutions) grades 8-14:

Duties of Position. Train and educate students with allowance for the specifics of the "safety principles" course, promote the formation of general culture of the personality. Use various forms, techniques, methods and means of training. Organize, plan, and conduct training (including elective and undetermined) classes in the course in the amount of 9 hours per week (360 hours per year). Participate in developing educational programs, and in the planning of measures of the institute for protection of the labor, life and health of students. Ensure the implementation of the educational program, bear responsibility for its complete implementation in accordance with the training plan and the schedule of the educational process. Ensure that the students comply with discipline. Interact with interested institutions and organizations. Jointly with public health institutions, organize medical examinations for youths of pre-draft

and draft age. Provide assistance in the selection of youths for entry into military educational institutions. Keep a record of military-obligated personnel. Conduct practical classes and drills in actions to be taken by students in emergencies. Assure the preservation of property, and the creation and improvement of educational facilities in the "safety principles" course and compliance of the students with the rules of safety during classes. When there is no position of chief of staff of civil defense in the table of organization of the educational institution, devise a plan of civil defense (GO) of the installation, organize civil defense classes with workers, prepare and conduct installation civil defense measures, devise measures to improve the functional stability of the educational institution should various emergency situations occur, and assure the readiness of protective structures, individual protective gear, and civil defense formations in extreme situations. Systematically raise his professional qualifications. Communicate with parents or persons replacing them. Meet the requirements for safety procedures and industrial sanitation in the operation of training equipment. Be responsible for the lives and health of students during the educational process.

Must Know: The laws of the Russian Federation "On Education," "On Defense," "On Civil Defense," and other normative documents on training and education measures, with allowance for the specifics of the "safety principles" course; the principles of pedagogy and psychology; the theory and methods of "safety principles"; the rules for protection of life and health of students; the principles of labor legislation and rules of labor protection; organizational structures of the warning system and actions in emergencies; the basic principles and methods of protection of the population in natural and ecological disasters, major industrial accidents and catastrophes, and also protection against modern weapons; techniques for provision of first pre-physician aid.

Required Qualifications By Pay Grade:

Grade 8. Secondary professional education, special training in civil defense or secondary military education without requirements for work experience.

Grade 9. Higher professional education and special civil defense training or higher military education without requirements for work experience, or secondary professional education and special civil defense training or secondary military education and work (service) experience in specialty of 2 to 5 years.

Grade 10. Higher professional education and special civil defense training or higher military education and work (service) experience in specialty of 2 to 5 years, or secondary military education and work (service) experience in specialty of more than 5 years.

Grade 11. Higher professional education and special civil defense training, or higher military education and work (service) experience in specialty of more than 5 years.

Grade 12. ("Safety Principles" teacher/organizer, category II) Must meet the general requirements for the "safety principles" teacher/organizer; assure stable positive results in the training and educational process; actively participate in the work of creative groups and methods associations; know how to independently develop methods for teaching the subject, and to use progressive methods of teaching the subject in his work, and also have:

- Higher professional education and special training in civil defense or higher military education and work experience in the position of "safety-principles" teacher/organizer of no less than 2 years.

Grade 13. ("Safety Principles" teacher/organizer category I) Must meet the general requirements for the "safety principles" teacher/organizer category II. Must know the methods of analysis of training-methods work in the subject. Must draw up and implement individual educational programs. Must know how to direct the work of creative groups or methods associations in the subject. Must also have:

- Higher professional education and special civil defense training or higher military education and work experience in the position of "safety-principles" teacher/organizer of no less than 4 years.

Grade 14. ("Safety Principles" teacher/organizer of highest category) Must meet the general requirements for "safety principles" teacher/organizer category I; devise new training programs, pedagogical techniques and methods of teaching the subject; conduct work to test these; have the skills of experimental work. Must also have:

- Higher professional education and special civil defense training (or higher military education) and work experience in the position of "safety principles" teacher/organizer of no less than 6 years.

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Conference Considers Future of CBR Service

94UM0186A Moscow VOYENNY VESTNIK in Russian No 11, Nov 93 (signed to press 20 Sep 93) pp 31-33

[Report by Col V. Mayatskiy: "Military Chemistry: The Reality and the Future (Report on Special Operational Assembly)"]

[Text] In accordance with the operational and combat training plan for the Ground Troops a special operational assembly was held for supervisory personnel of the CBR troops and military educational institutions at the Scientific Research and Testing Institute in Shikhan'y from 14 to 17 June of this year. This year it dealt mainly with development of the Radiation, Chemical and Biological Service and troops of the Russian armed forces:

The concept for their development, their missions in peace time and time of war, their combat training, their equipment and so forth.

According to plan, the first two days were designated for a scientific military conference on "Problems of Radiation, Chemical and Biological Protection, and its Technical Support." Colonel-General S. Petrov, chief of CBR Troops, delivered the introduction and a report. Describing the difficulty of the transitional period and its influence upon the shaping of a new Russian army, he noted that in addition to all else, somewhat different factors are still the determining ones for the CBR service and troops.

On the one hand, despite the signing of a number of significant international agreements pertaining to weapons of mass destruction, they continue to pose a potential threat to military personnel and the civilian population in case of an armed conflict involving their employment. Furthermore, there is already information on modern scientific research which does not fall within the framework of existing types of OMP [weapons of mass destruction]. These are primarily binary systems with other than traditional action, chemicals which, although not covered by the Convention Banning the Development, Production and Employment of Chemical Weapons, and on Their Destruction, put military equipment and the like out of action.

On the other hand, there is a growing likelihood of accidents involving highly active toxic and radioactive substances. Incidents of recent years at industrial enterprises and in transport have convincingly demonstrated that the technogenic aspect poses no less a danger than the effects of nuclear and chemical attacks.

There is yet a third circumstance of considerable importance. While the two superpowers, the USSR and the USA, were previously drawn into the arms race, a totally opposite process has now begun. Chemical disarmament, that is, the salvaging of our stockpiles of toxic substances which were to have been delivered to the CBR troops, will cost Russia 1.5 trillion dollars at current prices.

The requirements of the CBR troops were then defined. First of all, they have a dual purpose enabling them to carry out missions equally effectively in peace time and in time of war. Their weapons and technical equipment must be all-purpose and highly productive. In the future the T/O of the units and subunits will be determined precisely by the capabilities of the equipment. The command and control system for the CBR troops will also undergo considerable change, since one is inconceivable at the present stage without being integrated into the overall system of command and control of the forces our specialists are supporting. Finally, the CBR troops cannot survive without the development of their own infrastructure.

Many generals and other officers presented co-reports. The most diverse issues were raised. I shall mention a

few of them: The participation of CBR troops in the destruction of chemical weapons and the cleansing of the environment, the specific features of the emotional and psychological conditioning of the personnel in the contemporary situation, improvement of the training system, including the training of officers, in view of the low manning level of the units and subunits and the transition to contract service, and so forth.

A discussion of radiation, chemical and bacteriological protection in a battle and an operation evoked the greatest interest. Unlike chemical support, its organization and implementation will be directed toward reducing losses to a minimum and ensuring the execution of the missions assigned to them in a situation of CBR contamination, as well as counteracting high-precision weapons, weapons laying and reconnaissance facilities. It was suggested that the place and role in the overall system of troop protection and the new type of combat missions be viewed from the standpoint of the combined-arms commander and not the Chief of the CBR service.

During the following two days the assembly participants, as well as Colonel-General A. Sergeyev, commander of the PriVO [Volga Military District], Lieutenant-General G. Shpak, district chief of staff, and Saratov Oblast leaders attended practical exercises. They were first shown an exhibit of Russian line gas weapons and ammunition developed for them by associates at the NII [Scientific Research and Testing Institute]. They then inspected prospective models of CBR weapons and protective gear. A special protective suit with a ventilated space beneath the surface, all-purpose, on-board BKSO [on-board special decontamination systems] designed for use with water or solvents, and much more were demonstrated at special sites.

Deserving of attention in the area of line gear for measuring ionizing radiation were new instruments for measuring dose strength: The IMD-2 with an operating range of 10-5 to 103 roentgens/hour, which can be fixed, on-board or portable; the IMD-5, which can register both gamma (within a range of 6 to 200,000 millirads/hour) and beta radiation (50-5,000 decays/minute cm²); the IMD-22, designed for measuring the radiation level in an area (10-104 rads/hour), as well the total permissible dose of pulsed gamma-neutron and continuous-wave gamma radiation (50-2,000 rads).

With respect to the other types of CBR weapons and protection, many of them were also demonstrated in action after they were inspected. This was due to the fact that in view of the significant reduction in the number of exercises and drills in recent years, many combined-arms officers, particularly the specialists, have lost their skills in organizing and carrying out CBR measures. Among other things, they have almost forgotten the methods of employing incendiary weapons and aerosols, at a time when the importance of these in unit and subunit combat is continuously increasing today.

According to the international classification incendiary weapons are listed as conventional weapons. Their indisputable advantage, however, a fact demonstrated in the Great Patriotic and Afghan wars, lies in their powerful emotional and psychological effect upon personnel. The flamethrower units and subunits, the artillery and the aviation presently have incendiary ammunition.

A practical exercise in a tactical setting was organized and conducted by Col I. Mukhin, chief for Combat Training of the Directorate of the Chief of CBR Troops. The flamethrower operators were the first to demonstrate their skills. With a squad salvo they destroyed an infantry group with armored equipment. They fired the rocket-propelled infantry flamethrower with different filling: a thermobaric compound and an incendiary mixture.

An experimental model of a combat vehicle for flamethrower operators was also demonstrated. Theoretically, it enhances their effectiveness when operating together with motorized-rifle subunits in close combat. Institute associates have mounted a compact, 12-barrel, bank-type unit on a tracked armor chassis, which can fire the RPO-A organic flamethrower in single-fire or automatic mode at a range of 700 meters. The vehicle was designed for a squad. It will also carry spare rounds and support the flamethrowers with organic guns and machine guns.

A one-shot, jet flamethrower is unique and promising. It is made in a standard RPO-A container and is loaded with a condensed liquid incendiary compound and designed for destroying targets at a range of up to 70 meters in street battles, in structures, tunnels and so forth.

The aviation then took over. Two Su-24s dropped ZB-500Sh incendiary tanks on a motor-vehicle column, each containing 250 kilograms of incendiary mixture. The effect was impressive. The next pairs used aerosol counteraction substances. DAB-100-90fm smoke bombs blinded the "enemy" in his positions for a long time. An AAP-500 airborne aerosol device was used from an altitude of 100 meters to cover the fly-through route of a tactical airborne landing force with a vertical screen.

The most difficult and extensive aerosol camouflage missions will still be performed by the CBR troops, however. The technical equipment for this is presently being modernized, and new models are being developed. This primarily involves on-board aerosol generators for spray trucks. The ARS-14 equipped with them is capable of generating smoke continuously for five hours, creating a 600-meter aerosol cloud with improved parameters.

Improved operating modes were presented for the organic smoke machines (TMS-65D, TDA-2M, TDA-2K): pulsating or combination and directing certain free-flowing materials into a high-speed stream of dispersed aerosol-generating elements. They not only do not reduce the space-and-time features of the screen but are markedly more effective than existing ones—in their

consumption of smoke mixture, their covering of the infrared band, and so forth. Ultimately all of this will enhance the capabilities of the CBR troops for aerosol counteraction by a factor of 2-3.

The assembly concluded with a class on the subject "Mopping up Following an Accident in Transporting SDYaV [Highly Active Toxic Substances]." It was also organized and conducted by combat training officers of the Directorate of the Chief of CBR Troops. Personnel of the unit commanded by Lt-Col S. Safoshkin took part. It was held at a training field specially outfitted with a rail bed and tank cars.

The advance group was the first to reach the accident site. CW reconnaissance scouts ascertained the situation at the center, marked a contamination zone around the perimeter and designated the entry route. The column of Capt A. Kartashov's composite subunit soon came up. They began emergency work following brief reconnaissance. They covered the mirror of spilled SDYaV with foam and then began diluting it. The mixture was trapped, neutralized and removed to a safekeeping site.

The exercise was instructive. Most importantly, however, it made it possible to demonstrate for the assembly participants the sequence and the process of all the operations involved in the system for mopping up after an accident involving highly active toxic substances at civilian facilities.

In his summation Colonel-General S. Petrov, chief of the CBR troops, gave a good rating to the performance of all the personnel who helped set up and conduct the assembly. Many of them were singled out for valuable awards and monetary prizes.

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PEACEKEEPING FORCES

Peacekeeping: Rapid Deployment Plus Will to Use Force

94UM0175B Moscow VOYENNNY VESTNIK in Russian No 9, Sep 1993 [signed to press 20 Aug 93] pp 17-19

[Article by Lt-Col G. Zhilin, Volga Military District, under the rubric "The Problem Demands a Solution": "Troops of Peacekeeping Forces Must Operate Decisively, Firmly and Without Delay..."]

[Text] There has been a steady increase in the number of armed conflicts on the territory of the CIS countries in recent years. And there have been many causes. The main one, in my opinion, lies in the inability of authorities to forestall a developing outbreak of violence and particularly to extinguish the flames of fratricidal war by political and economic means.

It is also apparent that local authorities are unable to extricate themselves from such crises without external assistance involving the use of force. This has been

confirmed by recent events in the Dniester Region and South Ossetia, where peacekeeping forces have had their say.

The only peacekeeping division in Russia has been formed in the Volga Military District. Some of its units and subunits are already performing missions in hot spots. Although it should be said for the sake of the truth that units and formations of the Ground Troops, the VDV [Airborne Troops] and the MVD [Ministry of Internal Affairs] have performed such functions and continue to do so today.

A careful analysis of all the conflicts and their localization by means of MS [peacekeeping forces] leads one to believe that the peacekeeping forces are not very effective. Soviet Army and MVD units separated the sides in the conflict in Nagornyy Karabakh and on the border between Armenia and Azerbaijan. They did not achieve the desired results, however.

Something similar is occurring right now. Units of the 201st Motorized-Rifle Division were able to do practically nothing in Tajikistan until they received reinforcements and authorization to take decisive action. The situation in South Ossetia is unstable.

There is an exception, to be sure: The positive experience in the Dniester Region. We succeeded in extinguishing the flames of civil war there at the very height of the battle. It was not peacekeeping forces, though. When these arrived from Russia, the armed conflict had already been basically put down by units of the 14th Guards Combined-Arms Army. It was the competent action of the regular Russian Army which halted the carnage on the streets of Bendery.

It is a well-known fact that the commander of the 14th Army set up posts on the most dangerous sectors. The people called them "Lebed barriers." It would be naive to assume that these were weak posts with six soldiers and an armored personnel carrier, however.

The fact is that Lieutenant-General A. Lebed, relying upon a superb intelligence network which he had set up, inflicted such damage upon attacking units of the opposing side with mobile artillery groups it became clear to them that it was pointless to continue the bloodshed. Surprise, precise, powerful, preemptive strikes, as well as the availability of back-up mobile armored groups, forced the initiators of the military conflict to come to the negotiating table. And it can be boldly stated today that, backed by the powerful 14th Guards Combined-Arms Army, the peacekeeping forces have successfully performed their functions for a year now. It would be difficult to say how events would have developed had the Russian formation not been in the area. Reports that Moldova is demanding the withdrawal of units of the 14th Army from the Dniester Region have recently appeared in the press. But let us imagine what would become of the peacekeeping forces in that case. Obviously the same thing which occurred

with the UN subunits in Lebanon in 1962, when Israel committed aggression. Flouting international law, its troops passed through the combat formations of the UN forces swiftly and certainly. The same thing was done by units of the Croatian Army this spring, when they pushed back the UN battalions insolently and with impunity and launched offensive operations against the Serbian Kraina.

We have our own bitter experience as well. Last summer, when we were assigned the job of converting one of the district formations into a peacekeeping formation, we recommended setting up separate motorized-rifle battalions both on BTR-80s and BMPs [infantry fighting vehicles], as well as separate mobile artillery units (with intelligence assets) and subunits of army aviation. In view of the fact that the peacekeeping forces would be operating independently, we proposed including rear service and technical support subunits.

However... a version involving a light, regiment-type military unit was adopted. As a result we have a thin chain of peacekeeping troops and patrols at hot spots. The commander of a regiment (or battalion) is unable to set up a reserve of long-range guns and mobile forces.

That sort of day-to-day service would seem adequate in a peacetime situation, of course. But where is the guarantee that we will not have a repeat of what occurred in Central Asia or in the Caucasus? Seeing that the peacekeeping forces there were incapable of providing a decisive rebuff, mobile armed groups and bands began operating actively. And the flames of civil war flared up with even greater force.

This is why I share Lieutenant-General A. Lebed's opinion: "The main experience in preparing peacekeeping forces consists in the following: If a decision is made to use troops, they must be employed decisively, firmly and without delay. And it must be clear to everyone that a force has arrived capable of putting every insolent, encroaching bandit in his place. Anyone attempting to throw a wrench into the works will be arrested or destroyed." (VOYENNOY VESTNIK, No 1, 1993).

The composition of the forces and the organizational structure of the units must provide for the bloodless accomplishment of all the assigned missions. In other words, the military strength of the peacekeeping forces and their preparedness for decisive action must be such that the opposing sides immediately lose their desire to continue the war. Incidentally, the American command element understands this very well. The experience of units and formations of U.S. forces in the performance of peacekeeping actions is deserving of attention. The Americans keep a close eye on the development of every conflict. And if the government makes the decision, the command element has adequate intelligence and rapidly prepares and dispatches to the given area an adequate number of troops.

To the Americans an adequate number is an absolute superiority over the enemy. Moreover, it is an absolute superiority primarily in equipment and modern weapons. When a large body of supermodern combat equipment, with a deafening roar amplified many times over by special propaganda machines, appears suddenly from the air, land or sea, the warring parties automatically develop a desire to solve all the problems by peaceful means. And should some field commander still open fire, a devastating strike will be inflicted upon him from air and land. The American troops are operating in this pattern in Somalia.

This unquestionably requires a lot of personnel and assets. It is justified, however. There is a large probability that the fratricide can be halted without bloodshed. If we take this route (and there is apparently no alternative), then, based on our experience in the Dniester Region, we must first of all give the peacekeeping forces political status. Then their units and formations must be reinforced. In the CIS situation peacekeeping forces with light weapons cannot separate the sides (this was demonstrated by the events in Central Asia and in the Caucasus). I repeat, the men in the blue helmets must have real power. Let the soldiers man the posts and patrol with small arms in a jeep or an armored personnel carrier, but they must be backed up by a powerful striking force, as they say, of self-propelled, long-range artillery groups and subunits of combat helicopters and ground-attack aircraft. And, naturally, also by a mobile reserve of tactical forces in tanks or infantry combat vehicles.

There should be special stress on intelligence. Peacekeeping forces must be equipped with surface reconnaissance radar, night vision devices and sets of reconnaissance and signaling devices. These should make it possible to monitor areas and forestall an attack by formation bands.

Units which perform special missions are manned and outfitted in this way. Take the expeditionary brigade of US Marines, for example. Its members can carry out its assigned missions on their own. Such a brigade includes a field landing group of Marines, a composite air group and a brigade rear service group. Such a tactical and operational formation has more than 50 tanks, over 120 guns and mortars, around 120 Tow and Dragon ATGMs and other antitank weapons. It includes as many as 100 air defense weapons, more than 100 infantry combat vehicles and amphibious armored personnel carriers, around 200 combat planes and helicopters.

A Marine expeditionary battalion includes a battalion airborne group, a composite air squadron and a battalion rear-service support group. Its arsenal includes as many as five medium tanks, six 155mm howitzers, 40 antitank missile systems, around 20 mortars, 20 Stinger air defense systems, almost 30 helicopters and 15 armored personnel carriers. These formations are not intended for peacekeeping missions, of course. Their structure could provide the basis for structuring and manning

Russian peacekeeping forces, however. It is the opinion of specialists in the Volga Military District that a division of peacekeeping forces should be a part of the Russian Army's mobile forces; more specifically, of its rapid-reaction forces. Such a formation could be employed in its entirety or in part in the case of a full-scale war or limited (local) wars. If necessary it could perform peacekeeping missions as well. Such a formation should have a brigade composition, since this is the optimal organization.

Let us say that it could include 12 separate motorized-rifle battalions, of which four would be "heavy," that is, armed with tanks and infantry fighting vehicles, while the rest would be on BTR-80 wheeled armored personnel carriers. And certainly, three or four support subunits. This would enable the command element to execute missions with greater flexibility, to put together and sent to a designated area the optimal grouping of personnel and assets. You will agree that in one situation two light battalions (on armored personnel carriers) with a support battery and a flight of helicopters is sufficient, while another would require five battalions, two of them "heavy" battalions, a couple of separate, self-propelled artillery battalions for overall fire support, and one or

two squadrons of mixed helicopters. They would be headed by brigade staffs and supported by appropriate material and technical support groups.

And so, a formation should have four or five separate, self-propelled artillery battalions, army air subunits and separate units of all types of support forces.

Yes, this is reminiscent of a US mechanized division, but the purpose of the formation, which would ordinarily be employed not at full strength but in part, necessitates the adoption of precisely such a structure. In the case of peacekeeping missions, the subunits in armored personnel carriers would perform patrol service. Their authority, however, would be backed up by intelligence subunits and helicopters of the army aviation, a general support group and strike groups of "heavy" battalions.

It is not possible in a single article to cover all of the problems involved in the use of peacekeeping forces. Some people will probably disagree with my suggestions for the employment and the composition of peacekeeping units. So let us argue the matter. After all, controversy brings out the truth.

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UKRAINE

Black Sea Fleet vs Ukrainian Navy

'Sahaydachnyy' Prevented from Docking

94UM0205A

[Editorial Report] Kiev NARODNA ARMIYA in Ukrainian on 4 August 1993 on page 1 carries an article under the heading "Conflicts Accompany Emergence of Ukraine's Navy," and subtitled "Power Disruptions Affect Patrol Ship 'Hetman Sahaydachnyy'."

Power to the patrol ship, 'Hetman Sahaydachnyy' from on-shore power sources was cut off recently. The disruption in electric power sources led to major expenditures of fuel and service life for the diesel engines aboard the patrol ship. This technical problem prompted the warship's transfer to another Sevastopol wharf. The ship was prevented from docking and establishing communications. "Guardsmen" cut the Hetman Sahaydachnyys mooring lines. As a result, the commander, Captain 3rd Rank V. Katushenko ordered the patrol ship to stand off at some distance from the "inhospitable" shore. Ukrainian sailors had to wait a whole day to find out whether or not the Hetman Sahaydachnyy would be able to tie up along side its new wharf.

This conflict was eventually resolved, "but not without intervention of 'higher authorities' in Kiev." The report concluded with the reminder that, "Sevastopol legally is the primary navy base for our state."

Heat Cut off to Sevastopol Naval Institute

94UM0205B

[Editorial Report] Kiev NARODNA ARMIYA in Ukrainian on 8 December 1993 on page 1 carries an article under the heading "Heat Turned Off At Sevastopol Naval Institute" reporting a heating plant shutdown that left the Sevastopol Naval Institute in a "critical situation."

The existing agreement calls for the supply of heat to the Sevastopol Naval School by one of a group of Black Sea Fleet technical networks. Captain 2nd Rank Yevhen Rozhnov, in charge of this network, informed the Institute leadership that the heat would be turned off after 30 November in accordance to demands by the Black Sea Fleet Command, explaining that this measure was due to a lack of heating oil for the boilers. The heat network was to be closed up and sealed, to "freeze" the institute.

The report pointed out that some thousand cadets were the hostages of this disruption, which occurred despite the fact that the Institute had made full payment for November and, despite financial difficulties had promised to make prior payments.

In a subsequent article Kiev NARODNA ARMIYA in Ukrainian on 25 December 1993 on page two showed the Sevastopol Naval Institute efforts to continue operations in spite of the heat being turned off since the

beginning of December. The article disputed the explanation that the disruption was due to a lack of fuel in the Black Sea Fleet. It maintained that the 1760 tonnes of heating oil set aside in the summer would have been sufficient for the winter. But on 16 August a document arrived from the Black Sea Fleet, breaking the 30 July agreement for fuel service to Ukraine's Navy. The article maintained that the Black Sea Fleet took the oil from Ukraine's Navy to settle accounts with other Ministry of Defense units.

The report rejects Black Sea Fleet explanations and states that, "This violation of the juridical side of the agreement forced Ukraine's Navy fuel service to appeal to an arbitration court over the disputed material."

Naval Infantry Directorate Created

94UM0205C

[Editorial Report] Kiev NARODNA ARMIYA in Ukrainian on 12 January 94 on pages 1-2 reports in an article lamenting that the Black Sea Fleet naval infantry brigade might have shared its material base and experience but has not done so and, despite moves by Ukraine's marine battalion to maintain friendly relations with the Black Sea Fleet naval infantry brigade, Ukraine's formation of its own naval infantry organization has at times been met with hostility and suspicion.

Engineering Service Formed

94UM0205D

[Editorial Report] Kiev NARODNA ARMIYA in Ukrainian on 6 January 1994 on page 1 carries an article under the heading "Ukraine's Naval Engineers Pressured." Along with a navy, Ukraine has been forming and selecting cadre for a Naval Engineering Service. Naval Engineering Service officers in the Odessa and Mykolayiv garrisons of the Black Sea Fleet had expressed their wish to serve Ukraine's armed forces and had taken the oath of loyalty to the people of Ukraine. Workers and employees in these also voluntarily decided to transfer to Ukraine's naval engineering service.

However the situation became tense after the Black Sea Fleet command in Mykolayiv sent armed soldiers to place the building under guard and ordered the officers, workers and employees to leave the facility. Thanks only to the timely intervention of the senior naval officer in the city of Mykolayiv, Captain 1st Rank A. Rodkin, was further conflict avoided.

The commander of Ukraine's Navy, Vice Admiral V. Bezkorovaynyy and acting Black Sea Fleet Commander V. Larionov met to resolve the incident. Given that a similar situation could arise in other Ukraine Navy garrisons in which Navy engineering sections were being formed, an agreement was reached to continue consultations, in order that the process not get out of control.

Ukraine's navy press center rejected all claims that it forcibly impressed naval engineering workers and employees in the Odessa and Mykolayiv garrisons into Ukraine's Navy.

Conflict Over Housing

94UM0205E

[Editorial Report] Kiev NARODNA ARMIYA in Ukrainian 21 December 1993 carries on page 1 a short article reporting on a conflict between Black Sea Fleet and Ukrainian Navy personnel on 14 December. According to the Navy Press Center report about 20 Black Sea Fleet naval infantry, led by an officer, came to a housing area which had some days earlier been occupied by families of Ukrainian Navy personnel. They presented residents with the demand that they vacate the quarters and tried to enter the building. However they were stopped with the help of four unarmed Ukrainian sailors. The article noted the irony of this occurrence on the same day on which Ukraine's Navy Commander Vice-Admiral Bezkorovaynyy was meeting with First Deputy Black Sea Fleet Commander, Vice-Admiral Larionov to discuss problems in dividing the housing.

Kiev NARODNA ARMIYA in Ukrainian on 19 January 1994 reports on page 1 that Ukraine's Navy Commander, Vice-Admiral Volodymyr Bezkorovaynyy made a trip to the Navy's Odessa and Izmayil Garrisons. While with the Izmayil Garrison he was briefed on combat training and the formation of a section of the Naval Engineering Service within the garrison.

In Odessa Bezkorovaynyy met with deans and department heads at the Odessa State Maritime Academy and the Odessa Maritime Engineers' Institute, where training of specialist, future officers for the navy was discussed.

Vice-Admiral Bezkorovaynyy also conversed by telephone with Acting Black Sea Fleet Commander Larionov. Agreement was reached on a procedure for resolving problems arising from unsanctioned actions of certain leaders or military collectives of either country.

Vice-Admiral Bezkorovaynyy expressed the need to work out a bilateral document between the Ukraine's Navy and the Black Sea Fleet to address housing, financing, energy supplies, etc. to prevent confrontations, which would interfere with mutual understanding and trust.

BALTIC STATES

Latvia to Seek Military Security With West

PM0802115194 Moscow ROSSIYSKAYA GAZETA in Russian 8 Feb 94 First Edition p 6

[Report "specially for ROSSIYSKAYA GAZETA" by ITAR-TASS correspondents Galina Kuchina and Yuri Sizov incorporating remarks by and interview with Latvian Prime Minister Valdis Birkavs, date and place

not given, under the "Former Union Republics" rubric: "We Do Not See the Future in a Gloomy Light"]

[Text] Russia remains Latvia's main trading partner. Goods from Russia constitute over 28 percent of total imports, while the proportion of goods being dispatched from the Baltic state is close to 30 percent. Latvia imports mainly energy and fuel resources from its neighbor—they form approximately one-half of the import volume.

Economists analyzing not only the absolute figures but also their dynamic processes noted long ago that Latvia is moving away from the eastern market and turning sharply toward the West. What is the reason for this strategy? It was with that question that we began our conversation with Valdis Birkavs, head of the Latvian Government.

In the premier's opinion, the "attempt to preserve old relations, however tempting that may seem, is doomed to total failure in the future." The Russian market, in his words, is already full of high-quality goods from many countries. Latvian goods, which are inferior to Japanese machinery and German radio equipment, may be in demand in Russia for a couple of years more only because of its market's capacity to absorb them. That would keep local enterprises "afloat" for a while. But then the inevitable collapse would follow. So is there any sense in continuing to create products today with a limited level of competitiveness? Is it not better to embark right away on the socially painful path of reforming the structure of production and seeking to meet the demands of the European and U.S. markets?

Valdis Birkavs is convinced that the republic's traditional sectors—radioelectronics, textiles, and timber processing—will recover and survive. What about the "RAF" minibus plant in Jelgava?

As the head of the government said, the plant has designed a new test model, the "RAF-style," and Russian enterprises will take part in its production. But this program is not going to be implemented until the beginning of the next century. For the moment the plant is living off its accumulated assets and the improvement of existing models.

Is politics not proving a hindrance to economic relations between Latvia and Russia? Yes, that is true, Valdis Birkavs agreed, and he recalled the story of the "capture" of two Russian generals. When that incident was over—as far as the Latvian side and the Russian side were concerned—there followed what the premier called the demarche of Leonid Mayorov, commander of the North-western Group of Forces. The colonel general issued an order on the use of weapons in the event of an attempt to seize Russian military installations.

Then when it seemed that passions had subsided and the differences of opinion had been sorted out, the "situation was immediately reversed," Birkavs said. The outline of the forthcoming troop withdrawal treaty immediately became less clear and instability crept into the negotiating process.

"The disturbance of the foreign economic balance could lead to internal political imbalance and an opposition onslaught after which the resignation of the government cannot be ruled out," the premier said. He added: "The limit of our concessions to Russia has been reached. But the talks must go on even in the present situation, impossible though that may be. There is no other way, the countries will not achieve rapprochement by military methods."

During the conversation the question of the situation of people who do not have Latvian citizenship was raised. This affects about one-third of the population. As is well known, officials in Riga have repeatedly asserted that the distinction between citizens and those without citizenship will amount solely to the right to vote or be elected. At the same time the number of laws limiting noncitizens' opportunities in the economic and social spheres is increasing. A second reading has been given to the law on state service, which envisages that only a Latvian citizen may be a state official. Article 35 of the law "On Aviation" says that only citizens may form part of an aircrew. Noncitizens cannot be judges, lawyers, or private detectives, they receive fewer passes, and they get a social pension amounting to 90 percent of the social pensions of citizens.

[ROSSIYSKAYA GAZETA] What is the head of government's view of the opinion of Max van der Stoep, CSCE high commissioner for the affairs of national minorities, that the problem of citizenship in Latvia has not so much a political aspect as an economic one?

[Birkavs] I think someone is trying to artificially aggravate this problem. After all, people go where things are best for them. The fact that there is no mass exodus from Latvia demonstrates that various categories of residents are not suffering a marked economic disadvantage. On the contrary, people want to live and work normally here. It takes time and some patience for the solution of the citizenship problem and the adoption of a law. Previously we did not even pay attention to citizenship. Now, however, when this question is constantly being raised, when there is talk about mass deportations, even though no one has any intention of doing such a thing, now people want an anchor in the form of citizenship.

Admittedly, there is a certain number of people who want to leave. There are around 150,000 of them according to the statistics of the "Roots" association, which is engaged on the resettlement of people to Russia. Around 30,000 Belarusians and Ukrainians also want to return to their ethnic homeland. They need assistance. If

the financial problem is resolved, the voluntary departure of 150,000 people would immediately ease the situation. Of course, the West too could help in that.

We have always said that we have three ways of normalizing relations. The first is a very cautious naturalization. The second is absolutely voluntary repatriation to the ethnic homeland with financial support for that process. There is one more way—emigration to third countries, but that of course will not be large scale. Incidentally, Riga has always been a transit zone from where, by virtue of its liberal conditions, people have after their arrival then gone on to third countries.

In meetings with representatives of many states I have always said: Those who want to leave must be helped. I have discussed this with U.S. Secretary of State Christopher and at other levels. But there has been no real movement. The process will probably become more active when the army has withdrawn.

[ROSSIYSKAYA GAZETA] What is the attitude in Latvia to Bill Clinton's initiative on the new reconstruction of NATO?

[Birkavs] We take a positive view of the "Partnership for Peace" program, it has long-term prospects. It requires resources, admittedly, but nevertheless we will take part in it. Had we already been participants in this program at the start of the incident involving the Russian generals, we could have turned to NATO for consultation because that is envisaged by Article 14 of the "Partnership for Peace" declaration.

The proposed mechanism for the peaceful settlement of conflicts is also valuable for us because the problem of security for Latvia will be a very topical one in the next two to three years. Indeed, the time has come to look at the military systems of other countries. We were part of the old, Soviet, system for quite a long time. We did not emerge from it with the fondest memories.

Of course, we will look closely at what is happening in the Russian Armed Forces because there are plenty of interesting reforms there. But this is not the right time for military cooperation and joint maneuvers with Russia. First of all we must settle mutual grievances.

[ROSSIYSKAYA GAZETA] So that is why you see even Israel and the Czech Republic as suppliers of weapons?

[Birkavs] I don't particularly like spending money on weapons. Nevertheless, we need to equip our military forces in a sufficiently organized way and for the fairly long term. We are not preparing to attack anyone. We simply need to have mobile, well-trained defense forces. Compared with European countries our budget has the lowest spending on the needs of the armed forces—just 1.8 percent. That is clearly inadequate and we, the government, are often criticized for that.

Even so, I am confident that Latvia will enter the 21st century not as a country with big military muscles but with the highest level of education in Europe. After all,

before World War II we had the highest number of people with higher education (per thousand inhabitants) in Europe. While looking back at the past, we see the future and we see it by no means in a gloomy light.

CAUCASIAN STATES

Armenian Aviation Chief on Need for Specialist Personnel

944K0418A Yerevan YERKIR in Armenian 15 Sep 93 p 5

[Interview with Air Force Aviation Chief Colonel Aleksandr Abrahamyan by A. Dokholyan: "Flight 'In Armenian'"]

[Text] The Air Force, one of the most important components of modern armed forces, is, for understandable reasons, a new thing for us. Up until recently we would look at military aircraft appearing in the sky overhead with an interest purely for the hardware itself. We now experience a conscious awareness that those intrepid souls up there are sons of Armenia, our boys. At first our joy was mixed with doubts: Would Armenia, which lacks vital necessities of life, be able to handle such a burden?

In spite of all this, however, on 26 July we celebrated the first anniversary of our Armed Forces. We are talking with Air Force Aviation Chief Col. Aleksandr Abrahamyan.

[Abrahamyan] In a structural sense we have essentially stabilized, and we are presently deploying our subunits. Instruction of young pilot personnel has also commenced.

[Dokholyan] Military aviation in Armenia is a new thing. How have you resolved the problem of specialist personnel?

[Abrahamyan] The fact is that we have started from scratch. Thanks to the efforts of our ministry, however, we received first-rate pilots, pilots who in the former Soviet Union had completed advanced training school. And we ourselves began training pilots locally. Many of these are today flying modern aircraft. We are now operating in Arzni, the Republic of Armenia Ministry of Defense Aviation Training Center.

[Dokholyan] Aviation, especially military aviation, is an expensive pleasure, as they say. And our republic is presently experiencing an economic crisis. I would imagine that this in all probability has an adverse effect on your work as well.

[Abrahamyan] Yes, it does. There are many difficulties and basic problems. The government and ministry support us, however. We are allocated an adequate amount of fuel. Otherwise, we would not be able to perform military missions.

[Dokholyan] What kind of living conditions do the pilots have?

[Abrahamyan] The good news is that in our republic, as was the case in the former Soviet Union, they understand the importance of and give priority to aviation. Only 2 or 3 of our pilots have not received individual apartments. First on our list of tasks is to provide them with an apartment.

[Dokholyan] Do you work in cooperation with CIS states, with the Russian Federation?

[Abrahamyan] Of course we are working in that direction. Everything, however, depends on Armenia's financial solvency.

There are also issues pertaining to internal matters: Violations of military regulations, desertions, etc. We are endeavoring to eliminate such things.

In the course of an informal get-together with primary-rank enlisted personnel, the latter indicated that they were not so dissatisfied with economic difficulties and difficulties with daily life (although pay is extremely low) as they were upset by the demeanor of "money-possessing" young men (strange as it may seem, even such as these sometimes grace us with their service in our army). At times it is difficult even for command personnel to "communicate" with them. One of the noncommissioned officers came right out and stated: "A person with more money than you can shake a stick at comes and stands in front of you and tries to dictate special conditions for his son."

It is a situation with which many of us are quite familiar. We encounter such phenomena all the time. The reasons for and the roots of this phenomenon are well known. The army is not an entity separate from society, and certainly it is subjected to the influence of the moral and ethical standards which exist in society. However, we should have kept such market relations out of the Armenian National Army at any price.

In spite of all the problems and setbacks, however, the Republic of Armenia Air Force exists today. Col. A. Abrahamyan replied as follows to the question: "If it became necessary today, could they defend our skies?"—"It is our duty to do so." And it is the duty of all of us to strengthen the National Army.

Improvement Seen in Armenian Army Status

944K0594A Paris HARATCH in Armenian 23 Dec 93 p 2

[Article by Arpi Totoyan: "Armenian Army Has Food, Uniforms and Authority"]

[Excerpt] [Passage omitted] It is obvious by now that [former minister of defense] Vazgen Manukian played an important role in finally converting the various Armenian armed units into a regular army during the 9 to 10 months (October 1992 through July 1993) he was in office. That interval also coincides with a period of relative peace on Armenia's borders, the recapture of Maghavuz and Martakert in Artsakh and the success in

Kelbajar. Evidently the work that [Manukian] started has continued in the same direction: As encouraging news reported by the NOYAN TAPAN news agency on 17 December suggests, problems associated with antagonisms that could be caused by the formation of the Armenian army have been set aside.

A meeting was held at the conclusion of the fall conscription campaign to tally up its results. Vazgen Sargsian, a former minister of defense and currently the minister of state responsible for defense affairs, says that the conscription has concluded successfully everywhere except in the two large cities of the earthquake zone, Gumri [formerly Leninakan] and Vanadzor [formerly Kirovakan]. So far 511 conscripts are missing in Gumri and 244 in Vanadzor. The deadline for reporting to duty has been extended by 7 to 10 days in those cities.

Problems associated with conscription were one of the principal reasons delaying the formation of the army for a long time. A not so insignificant proportion of the youth in cities tried every means to dodge the draft. Their parents also did everything necessary to make their children's task easier. Both the youth and their parents had forgotten the conditions of serving in distant locations in the Soviet Army in the past. That led to demonstrations and hunger strikes on Yerevan's squares, with the demand that Armenian soldiers serve their terms in Armenia. Ironically, when those seemingly unrealizable dreams came true so suddenly, those subject to the draft sought ways of dodging it rather than rejoicing. The report cited above does not offer details of the methods employed in the gratifying correction of this problem, but the important point is that a shameful and extremely dangerous situation has ended. That is affirmed most strongly by the following statement: "Incidents of administrative action to ensure the normal progress of the conscription campaign are becoming steadily rarer."

Of course, all this does not mean that the process of building the army no longer faces any difficulties or that there are no deficiencies to correct. For example, sometimes it is difficult to determine the permanent residences of young men who have migrated from Azerbaijan. It is also said that barracks buildings are insufficient. V. Sargsyan says that a new census must be taken in Armenia. The last one, taken in January 1989, immediately after the [December 1988] earthquake, cannot be considered reliable because it could not provide a true picture of the population. The most gratifying element of the said report is that the meeting underscored the following despite the complex problems facing the country: "The army is fully stocked with food and uniforms."

The NOYAN TAPAN report provides other details also. Armenia's military academy will begin operating next year and will train officers. At present Armenian officers are trained in Russia. Some of the current conscripts serve in the ranks of Russian border forces on Armenia's

borders with Turkey and Iran, as well as the Russian 127th division, which is based near Gumri.

Despite the many positive signs, V. Sargsian is far from being fully satisfied. He says: "Although many observers consider the Armenian Army the most combat-ready in the region, the Armenian leadership itself is viewing the national army critically, finding that much more must be done to consolidate the army's combat readiness and that the weakness of the armed forces of Azerbaijan and Georgia are temporary."

It can be gathered from the report that there is something more than the statement that "the army is fully stocked with food and uniforms." The reality of a successful conscription is proof that the problem of authority has been resolved. Those two points are sufficient to confirm that the army of independent Armenia has successfully overcome the basic hurdles of the initial period.

State of Azerbaijani Forces, Role of Russian Personnel in Karabakh Conflict

944K0659A Moscow OSHCHAYA GAZETA in Russian
28 Jan 94 p 5

[Article by Samed Mansurov: "In War as in War"]

[Text] I was here before the war and my recollections connected with peaceful Karabakh are beautiful. Today, however, they are only recollections. There is no return to the past, as there is no road to Agdam, which, in fact, has also not existed for several months.

We turn in the direction of the headquarters of the Agdam brigade. Regular buses taken off routes for soldiers' transportation pass on the road. Tomorrow a young replacement will join the battle. The column of the battalion medical station, which has thundered past us in the direction of the front line, smells of war. The buses remind us of the city.

In the barracks of the Agdam brigade, officers sleep on the floor and soldiers have forgotten what bed linen and blankets are. After a meager supper in the soldiers' mess one does not want to think about anything else but sleep. Here, at the very front line, this is a luxury, because the lice, with which the barracks are teeming, are not asleep.

In this war senseless victims (if, in general, it is appropriate to talk about any sense) are in the order of things. On the Azerbaijani side up to 90 percent of the losses are the consequence of the low level of combat training of both soldiers and officers. One colonel complained to me that from among the commanders subordinate to him no one knew how to handle even a compass. Despair is heard in the voice of the former Soviet Army officer, an Azerbaijani, who has served in Ukraine for 20 years.

Things are even worse with soldiers. Adolescents, who have barely left school, receive weapons almost in trenches. If a cartridge suddenly becomes jammed in the breech during combat, the weapon becomes a useless

piece of iron, because no one has taught the soldier how to take the Kalashnikov assault rifle apart and clean it. After the command "attack" soldiers maintain the correct direction of motion for no more than about 10 meters and then disperse in different directions like blind cats.

We arrived at the front line before the very beginning of the Armenian attack. The enemy tank was stopped one meter from the defense line—it almost overran the trench. A grenade hit the track and the T-72 rolled back downhill. If not for this lucky accident, both the defenders and we, journalists, would be in a bad way. Later soldiers tried to determine who fired more accurately. The most accurate grenade launcher operator can expect a reward of 2 million rubles.

What even the youngest cannot be denied is the desire to win. However, desire alone is not enough. "It is easy to be killed and this is by no means always heroism," says a young lieutenant—a battalion commander. "A soldier deserves more glory if he wins and remains alive." He did not want to remember how a unit of the second battalion tried to leave the position during the attack. The commander stopped them with shots into the air.

Soldiers are killed not only in battle. Quite recently 27 young combat engineers were blown up by an antitank mine during a training exercise. The commander explained to them the principle of fuze operation and forgot that in front of him there was a real, not training, mine. My friend was killed last year: During dinner the barracks was wiped off the face of the earth, because someone carelessly unloaded ammunition nearby.

Some battalions have been sitting in trenches since the summer of 1993, when Armenian forces scored several crushing victories in succession. The offensive was stopped thanks to a corps of Afghan mujahidin. In the middle of January of this year Afghans also liberated Goradiz, a strategically important station on the Iranian-Azerbaijani border. The Mujahidin act autonomously, coordinating only the most necessary details with the Azerbaijani command. An Afghan soldier receives up to 10,000 U.S. dollars per month. Legends are composed about Mujahidin in Beylagan, where their headquarters are located. People say that one Tajik-Afghan (the majority of those fighting in Azerbaijan are Tajiks) can handle a tank: He jumps up onto the armor with a pail of dirt and blocks its vision devices. The subsequent extraction of the crew from the tank is a technical matter. The Mujahidin bring prisoners from missions in packs. If they seize Russians fighting on the Armenian side, they do not hand them over to the Azerbaijani military. Afghans have iron discipline, although they scorn conventions such as uniforms, drill training, and so forth. On a road in Beylagan we picked up four Mujahidin, who mastered the Azerbaijani language to such an extent that they were able to explain where to bring them and to thank us at parting. The day before our 25-year old traveling companions seized Goradiz. An Azerbaijani girl, who was a medical corpswoman, told me later that

several corpses of women snipers—according to rumors, either Lithuanians or French—were found in the city ruins. All the women's throats were cut. "One of them had very beautiful hair," the girl said. After this story the driver of the microbus refused to drive us to Goradiz.

After the series of defeats last year the desertion of Azerbaijani soldiers assumed a catastrophic scale. President Aliyev's edict promised amnesty to those who ran away if they returned to their units before 10 January 1994. A few days before the expiration of this date crowds of deserters and their parents gathered in front of the entrance to the Ministry of Defense in Baku, trying to find out in the personnel administration where the units were located. The number of those who repented tripled after the decree of the military tribunal, which sentenced two deserters to execution by a firing squad, was published in the Azerbaijani press.

The prospects for the return of deserters do not gladden soldiers. The fighters think that, having run away once, they will also run away for the second and third time. "When the war ends, I am sure to meet one of them," says the bearded sergeant with a bandaged head. "I know what I will do then... If I stay alive." Soldiers in trenches do not consider deserters to be Azerbaijanis.

With the exception of several elite subunits in the Azerbaijani National Army there are no units capable of performing serious combat missions. Assault battalions and special forces, basically, consist of professional servicemen, former members of the special-purpose militia detachment. They are too few to alter the course of the war in a short time and to forget about the most serious destruction of Azerbaijani arms, which has led to a revision of the political course and change of the republic's leadership.

Moscow has never denied that the Transcaucasus is a zone of special interests of Russian foreign policy. However, until now Russian politicians have not brought themselves to acknowledge their indirect (or direct) participation in the Armenian-Azerbaijani war. Meanwhile, Russia's military aid to Armenia has never been a secret to those let in on it. In Yerevan the seventh combined-arms army of Russia's Armed Forces, which was later transformed into three mobile brigades modeled after American quick-response forces, was used either as a shield, or according to the direct purpose. Suffice it to recall the tank attack on Fizuli and the bombing of Azerbaijani settlements from the air by aircraft, which Armenia does not have.

With Aliyev's coming to power Baku's situation seemingly has changed for the better. A draft of the Azerbaijani-Russian agreement on military cooperation, which, probably, will be signed in the very near future, has caught my eyes. A compromise has finally been reached on the matter of joint operation of the former Soviet—and now no man's—center of radioelectronic reconnaissance in Gabal in the north of Azerbaijan, which is the largest in Europe. In exchange for concessions Russia

transferred to Azerbaijan several dozens of the latest "Shturm-S" antitank systems and, at the same time, specialists as well, who will teach Azerbaijani servicemen how to handle fine equipment. The results of backstage negotiations between Azerbaijani political leaders and the Russian military will make themselves felt in spring, when the weather makes it possible to activate combat operations around Karabakh.

In all, about 100 Russian military specialists now serve under contract in the Azerbaijani Army. Most of them have arrived here at the beginning of the current year. This is the result of the secret mission, on which a group of Azerbaijani recruiting officers departed from Baku to Russia at the end of December 1993. In the military commissariats of Moscow, Ivanovo, Yaroslavl, Nizhniy Novgorod, and other Russian cities Azerbaijanis obtained access to the service records of reserve servicemen: Some of them agreed to serve in the Azerbaijani Army. The republic's armed forces are experiencing an acute shortage of air defense, artillery, and other specialists. Russian military specialists do not (or hardly) take part in combat operations.

Nadzhmedlin Sadykhov, chief of the General Staff of the Azerbaijani National Army, is surrounded by Russian military specialists. Colonel Aleksandr Vasyak, chief of the Operations Directorate of the Ministry of Defense, who was invited from Russia, formulates and directs the activities of the Azerbaijani Army all over the front. At the headquarters of the Agdam brigade, Colonel Vasyak's eloquent expressions before a formation of Azerbaijani officers about the lackadaisical attitude of the latter made me give up the idea of asking the colonel a few questions.

Major Gribanov, chief of staff of x-brigade, came to Azerbaijan from Murmansk, leaving his wife and three children there. He is fighting for his homeland. The Russian Major considers it to be Azerbaijan, where he has lived for more than 1 year. Mikhail Vasilyevich says: "I am the same Azerbaijani as all of them. Sometimes I tell my children that I am a better Moslem than they are, although I am not circumcised. If necessary, I will die here."

ARMS TRADE

IDEX-93: Results, Conclusions

94UM0185A Moscow VOYENNY VESTNIK in Russian
No 11, Nov 93 (signed to press 20 Sep 93) pp 2-5

[Article by Col-Gen N. Dimidyuk, commander of the Missile and Artillery Troops of the Ground Troops, under the rubric "A Topical Subject": "To the Arms Market Through Joint Efforts"]

[Text]

IDEX-93: Results, Reflections, Conclusions

The Russian exhibit was the largest at the International Exhibition of Weapons and Military Equipment held in the United Arab Emirates this year. It included everything from a Kalashnikov assault rifle to a transport helicopter and a large ASW ship. In my opinion the willingness of enterprises in our defense complex to display the latest items with a view to selling them to potential clients was greeted with interest and at the same time with caution by military firms of the USA, Great Britain, France, Canada and the Republic of South Africa. And that is understandable. The arms trade today is the most lucrative business there is. It can be compared to diamond sales with respect to revenues generated. And one should not seriously count on mutual understanding among the leading foreign firms. The competition is fierce.

In order to trade successfully as equals, then, enterprises in our defense complex will have to take a sharp turn toward the market. I feel that since this is a state matter, an attitude corresponding to this status should be taken toward it. The exhibition demonstrated once again that we must give priority for the immediate future to the development of the most modern intelligence equipment, including airborne facilities. So long as we continue to invest money in the revitalization of enterprises producing obviously noncompetitive models, this problem will not be solved properly. Is it not time to officially designate in the nation a minimum of two or three competitors producing these products?

Foreign experience has indicated the need for such measures. The government of postwar Japan, for example, did not permit firms to produce products for export until a fully competitive basis had been shaped in the industry. The effects of these decisions were so great that competition became one of the most important organizational principles even in relations within firms. We know that the Sony company is presently developing computers and video recorders simultaneously in ten highly competitive areas.

This is typical also for the companies of other Western nations. Among the largest American companies producing the latest weapons, for example, only a tenth of the projects now reach the stage of commercial sale. Their designers always bear in mind the individual, the

team or the crew. A convenient arrangement of this or that weapon model, well-designed lighting for the compartment, reliable intercom systems, fans and air conditioners, and effective fire-extinguishing facilities are a basic requirement of the arms purchasers. Extremely important along with the administrative and legal measures are economic regulators, which include long-term measures (programs, subsidies and benefits for effecting important structural and technological reforms in the defense industry), as well as measures designed to stimulate ongoing legal competition. Along with foreign economic actions, these measures include the regulation of prices, taxes, interest and the benefit of state orders.

It will clearly be extremely difficult for our nation to take such a turn, particularly since the removal of the state from the economy has only begun. And this means that in order to stimulate competition the state must concern itself with the viability of those enterprises which are not experiencing the best of times. This state concern must differ from that of the present, however. If the state intends to take on the support of weak competitors, then it must see to the implementation of measures to improve their health.

Incidentally, it should be mentioned that the reduction of the defense budget is evoking concern that allocations for basic research in the defense industry will also be reduced. This situation could result, as an example, in Russia's artillery science and technology taking a back seat in world scientific and technological progress. And we have fine designers, real professional specialists, working in the military-industrial complex. Take the team at the Uraltransmash production association, for example. The MSTA-S 152mm self-propelled howitzer displayed at the exhibition was developed there under the supervision of general designer Yu. Tomashov. Comments by the military experts indicate that its technical-tactical features are superior to those of American, British and French guns of the same caliber. Its main merit is its modern ammo-feed system and its high maximum rate of fire. Nor could I fail to mention one other prominent designer, S. Nepobedim, who has developed a large number of missiles—from ATGM to the well-known Oka and the Tochka missile system, which was displayed at the exhibition. I believe that books will be written about Sergey Pavlovich and this designer's extensive service to the homeland. His creative work is based on a union of the latest achievements of basic science and advanced technology.

It is a terrible thing to think that many of these people will be deprived of the opportunity to engage in basic research as they should and will lose their scientific skills. In the conversion of the defense industry basic research should not be curtailed but, on the contrary, should be enhanced. This fact is for some reason discussed unwillingly and in different languages, as it were. Some people discuss it openly and honestly, while others just give accounts and reports. Still others are demanding reproachful, especially when they want to shift the

blame for their blunders onto subordinates. The latter, they say, underestimate the importance of this factor. But the language of truth should prevail in this discussion. He who is afraid to discuss the problem openly and honestly today, no matter how unpleasant it is, he who has had it with criticism directed at him is convincingly demonstrating that he has become a totally new type of conventionalist hiding his true identity behind the entire discussion.

Given the great importance of these matters, the level of preparation and organization of the exhibit takes on particular importance. I would note with satisfaction that in the course of the joint effort we developed good business relations with V. Glukhikh, chairman of the Committee for the Defense Branches of Industry, with his first deputy G. Yanpolskiy and with the exhibit's board of directors P. Trishin, V. Kartavtsev and V. Belukov.

It should be acknowledged, however, that, unfortunately, certain matters were not worked out in the best possible way at the first stage. In this regard I would have to express regret over the situation which developed with the loading of weapons and military equipment onto maritime and railway transport facilities and their unloading. The experience showed that the establishments and military departments involved need to give some serious thought to this matter. There was a shortage of gear for securing the items (rope, chains, bracing line and running-gear supports), beams and devices for loading large pieces of military equipment by means of cranes. This included design flaws in the equipment models themselves (absence of hooks, claws and other devices), which hampered their loading onto these types of transport. How does one account for all of this?

Or take the following, which should not escape notice. In my view, the range of the latest weapons and military equipment selected was so diverse it not only significantly complicated preparations for the display but also made it impossible to design the pavilion so as to draw the visitors' attention to specific models. IDEX-93 was the debut of our defense industry, except for specific models of aviation equipment, which had been displayed at previous international air shows. Nonetheless, this approach could still not be considered optimal. I believe that in future such large undertakings the weapons should be broken down into groups: Missile troops, artillery and air defense, for example; armored and engineer troops; aviation; communication and radioelectronic equipment, and so forth. This would make it possible to display not just "bare" models but the weapons system in its entirety. That is, everything involved with the system, including the ZIP [set of spare parts, instruments and accessories], repair assemblies, combat support supplies and equipment, and modern ammunition for the most diverse purposes.

It is hardly worthwhile to scrimp on funds to develop advertising write-ups, video films, posters and electrically operated stands depicting the parts and assemblies of the components and mechanisms for the models of training equipment to be displayed. We now need to mesh all of the know-how we have developed into a single whole and concentrate it all in the hands of those who produce the weapons and military equipment. I realize, however, that it will be extremely difficult or even impossible to do this. This is because the defense industry enterprises have not yet been granted complete independence.

The equipment is one thing, but its effect in the arms market will be predetermined in great part by how well the teams and crews are prepared. The generals and officers of the MO [Ministry of Defense] GRAU [Main Missile and Artillery Directorate] and GBTU [Main Armor Directorate], our directorate and the military districts deserve high praise in this respect. Tests involving live missile launchings and live firing were conducted under their supervision at the Gorokhovetskiy (MVO [Moscow Military District]) and Kapustin-Yar (PriVO [Volga Military District]) training centers. A special tactical exercise involving live firing and conducted under the supervision of Col-Gen V. Semenov, commander in chief of the Ground Troops, was successfully fitted into the exhibit preparations plan and was off perceptible benefit. This is where the officers achieved a moral victory and acquired confidence in their capabilities.

And now, as a result of the painstaking and intense work, top honors and first prize have been awarded to Russia's missilemen and artillerymen for firing on the range. They bettered the norm for combat performance in the desert by 25-30 percent and made no technical errors in the process. Thanks primarily to the good professional skills of officers A. Popov, S. Krainov, V. Polyakov, A. Dyrdin, V. Kuchinskiy, V. Kisov and A. Khodul, the demonstration firing and missile launches took place without hitches and with highly effective fire.

It goes without saying that when military duty merges with an inner need for self-improvement, with a love for the profession, in this meld are born such professionals. They know what they are worth and each of them, so to speak, has something to place onto the scale.

In conclusion, I should mention that the ideas expressed in these comments do not cover all of the problems involved in accessing the arms market by far. There can be no doubt about one thing, however, that we will not travel this difficult path without joint efforts on the part of state agencies, the developers of the new weapons and practical specialists in the forces.

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Role of Belarus in Arms Market

WS2801083094 Minsk VO SLAVU RODINY in Russian
25, 26 Jan 94 p 3

[Article by N. Vaskov: "Who Hinders Arms Trade?"]

[Excerpt] [passage omitted] What are the chances of sovereign Belarus on the arms market? Unfortunately, on the vast arms market we only have a modest stall occasionally visited by poor customers. We cannot compete with any other state because we do not manufacture the end product. The contracts that we managed to sign with "consumer states" as a rule have to do with obsolete products. In one of foreign-trade organizations I was told: "The list of our offers includes almost a hundred articles. However, in reality consumers are interested in five to seven of these. We simply have to scrap the rest. Rich buyers turn to rich producers, while our clients are poor. They do not put forward any special demands as long as the equipment can move and shoot."

However, one thing I cannot comprehend: immediately after the Republic signs a contract, even a small one, [for selling arms] protests are voiced by different institutions, including the Control Chamber claiming that the deal will bring material and moral losses.

What makes them think so? These simple examples will help us understand their logic. In the fall of 1992, the Belarusintorg Association tried to sell \$1 million worth of old weapons. Specialists say that the world price for the weapons was almost \$2.5 million. Belarusian controlling organs suspended the contract, having decided that the Republic cannot afford to lose \$1.5 million. In reality, Belarus lost much more than that, because it did not receive a penny. Nobody is going to pay us world prices for our products, because world powers, including Russia, will not put up with our attempts to compete with them in the arms trade either now or in the future. Besides, Belarus cannot provide spare parts or servicing for the arms it sells, which also brings prices down.

To be honest, I want to point out that many customers prefer to deal with Belarus because until recently, they could sign all the necessary documents in 15 to 20 days. Our government's approach is highly valued by entrepreneurs.

Here is another example: the controlling agencies once discovered that Belarusintorg was to pay a private company \$5,000 for serving as a mediator. They raised a hue and cry: why is a state-run company paying private businessmen? And why not? Belarusintorg was going to pay with its own money, extracted from its own revenues. The existing Law on Enterprises does not prohibit this.

Claims that the Republic's political prestige may be damaged are often artificial and exaggerated. If one is honest he does not have to prove it to everyone.

Some time ago, newspapers carried reports on the Belvneshpromservis company, saying that the latter had attempted to sell a shipment of assault rifles to the United

States, and later the weapons were detained at the Yugoslav shore. Some politicians jumped on this case, because there is a ban on arms trade with countries like Yugoslavia. They maintained that Belarus might face international sanctions. However, is there any evidence that it was Belarus who sold the weapons? Are there any documents proving this? We sold arms to a third country and they acquired a new owner. If the latter violates international regulations, let his own government deal with him.

Many rules determining arms trade have to be changed. The fact is that Belarus, finding itself in an abyss, is sitting on a sack of gold.

According to most moderate professional estimates, after the collapse of the Soviet Union Belarus inherited heaps of modern arms, equipment, and property. Some experts believe that Belarus could earn up to \$1 billion even if it had to sell them at dumping prices. However, one of the main conditions is that sales should be conducted within the next two to four years and not later, because arms and all accompanying equipment become obsolete and consumers lose interest in them. We have entire arsenals packed with outdated artillery shells. The United States and Great Britain are helping us scrap them but they will not spend their money on this program forever. Thus, as long as somebody wants to buy our arms let us sell them. We do not have the means to eliminate large volumes of arms.

What and how shall we sell? Provided the \$1 billion is a realistic figure, all the interested ministries, departments, and companies should study this issue with utmost attention. Analysts believe that in the immediate future we must outline our position with regard to the inherited property of the former USSR. In the military-industrial sector these are enterprises, amalgamations, and the like. In the Armed Forces—these are troops, their property, and equipment.

Who does this legacy belong to? Undoubtedly, it belongs to the state. Thus, let the state handle all the serious aspects of the problem.

Let us start with the conversion project. Russia has begun altering its attitude toward conversion, its philosophy and ideology. What about Belarus? It is good that 30 U.S. companies are ready to participate in a bid for the best conversion project in Belarus. Three facilities have already been chosen for joint ventures—BelOMO, Minsk Computer Association, and Integral. Our partners believe that as early as 1994 they can launch production of satellite television equipment and medium-capacity automatic telephone stations. We can only hail such plans.

At the same time, we should not forget that the Republic has decided to have its own army. If we equip it with outdated weapons, our sovereignty will be very fragile. If we want to maintain our Armed Forces' combat readiness, like it or not we have to start producing arms at our

military enterprises. We cannot do this on our own because we depend on Russian producers for many technological processes. Thus, we must form joint stock enterprises. The process will be of mutual advantage. The famous Tunguska is used by a number of CIS, Middle East, and Persian Gulf states. The Belarusian contribution to Tunguska's production equals some 17 percent. If we create a joint-stock company we will be able to receive one-sixth of the profits. We will also preserve the scientific-technical elite, and maintain a high technical level of our Army.

The same can be said about tracking systems, communications equipment, equipment for training centers and test ranges, products like "Smerch," "Tor," "Isla," or "S-300."

It would be perfect if cooperation could develop within a single ruble zone. In this case Russia would not sell us arms and equipment at world prices. However, even if Belarus introduces a national currency, this approach will yield dividends.

What path should we choose? First Deputy Defense Minister Aleksandr Tushinskiy believes that we [the Defense Ministry] should not trade arms. The Ministry has its specific functions, while commerce lies in the competence of other structures. Beltekhexport General Manager V. Peftiyev suggests a solution that is worth mentioning.

Peftiyev maintains that the national economy should meet all the demands of the Army, which is the guarantor of sovereignty. A lion's share of Army orders should be placed with the military industrial sector so as to separate the latter from the rest of the economy. Besides, we should keep in mind that there is a vast demand for these kinds of products in Russia.

Second. We must finally determine what kind of army we need. I do not mean the number of cooks and generals. We must precisely know what would be the best solution under the current circumstances—whether we only need border guards, a couple of strategic missiles and a presidential guard, or a garrison in every one-horse town. This should be determined by an independent committee represented by intellectuals. The estimates should be done according to contemporary world standards and not norms adopted in the 1940's.

After it becomes clear what our Armed Forces need, the state represented by a special coordinative committee, should assume control over excess arms. The committee should be supervised by an official, no lower than a deputy prime minister, competent in the issues of military industries. This official should have special powers, including issuing orders to sign contracts stipulating conditions of payment to foreign middlemen and native commercial companies.

This organ should not have supervisory functions over commercial organizations. It should form joint-stock companies, place orders, and decide who should or should not be allowed to sell arms.

DEFENSE INDUSTRY

Discussion of Presidential Decree on Defense Industry Stability

94UM0198A Moscow VEK in Russian No 45, 15-25 Nov 93
p 1

[Article by Kirill Lebedev: "Pour in the Money, Defense Industry Workers Say"]

[Text]

It Seems the Restructuring of the VPK [Military-Industrial Complex] Will Have to Wait

Russia truly is a strange state! Two events of the past week make one proclaim this.

Minister of Finance B. Federov prepared a report for the session of the Presidium of the Council of Ministers, in which he noted that an increase in the budget deficit from 11.9 to 22.2 trillion rubles is taking shape this year. This exceeds the gross national product by 14 percent. The nation is on the threshold of hyperinflation.

Shortly before the session of the Presidium of the Council of Ministers President B. Yeltsin issued for official distribution an ukase "On Stabilizing the Economic Situation of Enterprises and Organizations of the Defense Industry and Measures to Secure State Defense Orders." The reader unfamiliar with this ukase will assume that it has to do with curtailing the appetite of the military-industrial complex. This would be only natural, since the minister of finance is warning of hyperinflation. Unfortunately, the reader would be wrong. That is how it is with us. We are moving toward hyperinflation but we do not want to reform defense production.

First, a brief account of the measures contained in the president's ukase. Military plants are allowed an advance on state defense orders up to a maximum of 20 percent of the total of annual budgeted allocations for the purchase of weapons and military equipment. At the beginning of next year enterprises filling defense orders are allowed to include in the basic cost of products outlays for wages in the amount of eight times the minimum wage; those engaged in the development of nuclear weapons, nine times the minimum. By way of comparison, other branches of industry are allowed to include only four times the minimum wage.

Let us say right off that the president cut back the rigid demands of the directors of the military-industrial complex. They wanted not 20 but 30 percent in advance for defense jobs. The president would go no further.

The commentators did not fail to underscore the fact that the president was pressured by the political atmosphere. It is not worth arguing with the directors of the military-industrial complex on the eve of elections, and the president understands that full well. This is why he signed the ukase.

The restructuring of the military-industrial complex will still have to continue, however. This unpleasant fact will not be mitigated by statements to the effect that the economic effectiveness of the defense industry has to be improved. It is clear even to a person only superficially familiar with the situation in this sector that the defense plants have never recognized market economic principles, but have operated and continue to operate by the rule: If you want reliable weapons, pour in the money!

Of course, one can take comfort from the fact that individual defense enterprises are now doing a great deal to produce substitutes for imported equipment, saving foreign currency for the state, that they are in fact converting and switching to totally civilian products. Nor can one forget that outlays for arms production are being reduced year after year. Still, in Russia's present situation it cannot afford outlays for these purposes, which place a great burden on it. Otherwise, no steps to stabilize the financial situation, over which the government is racking its brain, will help us avoid hyperinflation. According to the finance minister, it is even now at our front door.

DOCTRINAL ISSUES

Merimskiy: 'Afghanistan: Lessons, Conclusions'

94UM0172A Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 11, 1993 pp 30-36

[Article by Colonel-General (Ret) V. A. Merimskiy; continued; see VOYENNO-ISTORICHESKIY ZHURNAL, No 10, 1993: "Kabul-Moscow: War to Order"]

[Text]

Introduction or Invasion?

After undergoing treatment at the Kislovodsk sanatorium I returned to Moscow with my wife. The train arrived at Kursk Station near midnight. As we stepped out of the car we were met by an officer I didn't know, who told me that Army General S. F. Akhromeyev was expecting me.

Just a few minutes later I was at the General Staff. After inquiring after my health and apologizing for my "kidnapping" at the station, S. F. Akhromeyev went on the business part of our conversation.

It essentially boiled down to this. The Afghan government had approached our country's leadership several times with an insistent request to introduce Soviet troops into Afghanistan. The motives were as before—to place state facilities under protection, thus freeing the Afghan Army to fight the rebels. This matter was resolved positively. Agreement was reached that the Afghan side would make a radio announcement to all the world about its request. A mobilizational exercise had started in the Turkestan Military District, in the course of which the field administration of the 40th Army, the 5th and 108th motorized rifle divisions, and an army

contingent of combat and rear support units were being deployed at wartime strength.

In general, a force grouping was being created for introduction to Afghanistan. A small operational group headed by S. F. Akhromeyev was going there to provide assistance in resolving mobilizational matters. I was appointed his deputy. Colonels A. K. Kotlyar, M. M. Mordas and B. Ya. Rogontsev were assigned to the group from the Main Directorate of Combat Training.

I was surprised by this turn of events. Had the situation in Kabul really grown worse? The mass media, after all, had been reporting steady development of the April revolution, its support by the people, and a successful struggle against the counterrevolution. So what happened there?

I reminded S. F. Akhromeyev that after our military delegation returned from Afghanistan we had submitted a report to the Minister of Defense in which we clearly stated that it would be unsuitable to introduce our forces into this country. In addition, we emphasized that the freedom-loving Afghan people would not condone intervention from outside, and cited a number of facts confirming this conclusion. As an example when our Military Advisor made a casual remark to the Commander of an Afghan Army regiment, the reply was this: "We didn't ask you to come here. Go back to your own country, and we'll sort things out ourselves."

"The situation in the country took a dramatic turn for the worst after Amin assumed unshared power," S. F. Akhromeyev explained. "Repressions assumed mass proportions, by which the existing regime compromised itself, and conditions under which Amin might be overthrown by the counterrevolution had been created."

"But isn't it true that Amin isn't the first, and probably not the last ruler to be deposed in Afghanistan?" I noted.

"That's all so," S. F. Akhromeyev agreed, "but the Americans could come in together with the counterrevolution, and that would be extremely undesirable. In addition our relations with China, which supports Pakistan, are strained. And the situation in Iran isn't clear. It was in this situation that the question as to what we were going to do arose."

"The position of the General Staff was unequivocal—don't introduce any forces. When we were given the question of troop introduction for preplanning, we prepared a report to the Ministry of Defense. It indicated that extremely weighty arguments would have to support such a critical decision as introducing troops into a foreign country, and all the more so an Eastern country, and that we didn't have such arguments."

"Of course the leadership feels that our forces would stay in their garrisons and defend the existing regime against attempts to overthrow it from without, while inside the country the Afghan Army would deal with the rebels, and we would soon leave. Of course, it was more likely that

our prestige and international position would be undermined. Moreover, grounds would appear for accusing the Soviet Union of aggression. But an order is an order. Although let me say once again that the General Staff is opposed to introduction."

"So what are we preparing the division for—introduction or invasion?" I asked.

"For both the former and the latter," was the reply.

In the morning of 14 December 1979 our group took off by air to its base in the city of Termez. S. F. Akhromeyev was delayed in Moscow until evening. We were met at the airfield by 40th Army commander Lieutenant-General Yu. V. Tukharinov and Army Military Council Member Major-General A. V. Taskayev. Immediately upon our arrival at headquarters the commander informed us of the progress in mobilizing. Deployment of the army field administration, and of the combined units and units, was proceeding uneventfully. Rear Service units and subunits were mobilizing somewhat more slowly. A large quantity of motor vehicles had to be replaced. The fact is that during annual mobilization training, enterprise directors held back new high-capacity vehicles for themselves, sending small and even unserviceable vehicles to the forces in their stead. Understanding the difficulties of civilian organizations, the unit commanders shut their eyes to this. But the same situation was recurring even now, when the mobilization was for real.

The district's air force units had already upgraded to full combat readiness, and had regrouped to frontier airfields. S. F. Akhromeyev flew in to Termez by evening and reported that Amin had been deposed, and that Yaqubi was unruffled by this. No changes had occurred in the situation in Afghanistan. This communication didn't relieve the tension completely. Knowing a little about Afghanistan, I didn't exclude the possibility that events could develop unpredictably. When I asked who was taking Amin's place, Sergey Fedorovich replied that he knew nothing about that.

Our group's work plan was updated on the basis of the information we received. I was ordered to supervise preparation of the 5th Motorized-rifle Division in Kushka, which was under the command of Major-General Yu. V. Shatalin. A group of officers under S. F. Akhromeyev remained in Termez, where it prepared the army's field administration and the 108th Motorized Rifle Division.

It should be said that by the time of our arrival the administration of the 40th Army, which was under Major-General L. N. Lobanov, was basically manned by district staff officers and generals, and it was already a fully competent and sufficiently coordinated organism.

Our work basically consisted of providing assistance to commanders in developing teamwork and coordination in the subunits, units and combined units after their mobilization, and hammering staffs together as administrative bodies. Our task was made easier by the fact

that district officers were already working in both garrisons, and we were able to unite our efforts immediately upon arriving in the division.

Let me emphasize that the deployment and preparation of the forces proceeded almost overtly.

Official directives were received soon after. Their essence was that in accordance with a treaty of friendship with Afghanistan, and at the request of its government, Soviet forces were being introduced into the country to render assistance in combatting external aggression. No other goals were being pursued. As soon as the external interference ceased, Soviet Forces would be withdrawn from the country immediately.

These explanations were perceived with understanding by the personnel.

On 19 December 1979 S. F. Akhromeyev telephoned me to say that he had taken ill, and was flying to Moscow. He also reported that as it turned out, no action was taken against Amin, but Afghan Army units had been raised to higher combat readiness, and troops had occupied all key positions in Kabul. The idea flashed through my mind right away that if this were true, then introduction of our troops into Afghanistan would mean war. This is probably why the command opted to deploy one more motorized rifle division. But these forces were still not enough to wage war. When I asked whether this information was dependable, Sergey Fedorovich replied that it needed confirmation. I gained the impression that he wasn't receiving sufficient information from Moscow either. I was ordered to temporarily take charge of the work of the operational group. I took off for Termez, leaving Colonel L. K. Kotlyar as the senior officer in the garrison.

There was one question I couldn't get an answer to in preparing the troops for introduction into Afghanistan: What is this going to be—introduction or invasion?

At first glance there may appear to be no difference in the meaning of these two concepts. But actually the difference between them is enormous. An invasion is the entry of the armed forces of one state into the territory of another without the consent of its leadership. Naturally the invading forces encounter not only the armed resistance of the other side, but also the enmity of the people. Usually such actions end in major military conflicts or war. Introduction is entry of the forces of one country into the territory of another with the consent or at the request of its government. The conditions under which the introduced forces remain in the country are totally different in this case.

The situation was unclear because a conclusive agreement had never been reached between the governments of the two states at the official level. Nonetheless, I thought that this would be a troop introduction, or that

our forces out remain where they were. After all, conducting an invasion by the forces of two or three divisions would be absurd. Of course there was also a third variant—they could announce an introduction, but actually carry out an invasion. This variant would have been the most undesirable, and I would say that it would have been adventuristic and knowingly calamitous.

During our work we became persuaded that the timetable indicated in most mobilization plans for making the units ready was unrealistic—the time allowed was extremely short. Moreover the absence of a program for developing teamwork and coordination disconcerted many reserve officers, especially platoon commanders.

We were compelled to develop the needed program right during mobilization, but we had too little time at our disposal.

I communicated all of my remarks and proposals based on the mobilization personally to Chief of General Staff Marshal of the Soviet Union N. V. Ogarkov. He listened to me attentively, and asked me to put everything I said in writing. Later on most of our proposals were updated as the mobilization plans were revised.

In the evening of 23 December I reported the readiness of the divisions to march to Chief of General Staff N. V. Ogarkov once again.

The Marshal informed me that introduction of our forces was tentatively planned to begin in the second half of 25 December. The 108th Motorized Rifle division and only the reconnaissance group of the 5th Motorized Rifle Division were to be committed. The army staff would remain where it was. For the moment the 40th Army would consist of the 5th and 108th motorized rifle divisions and the 860th Separate Regiment of the Central Asian Military District, which was to begin moving out the next day. The 56th Separate Airborne Assault Brigade was to remain for the moment at the disposal of the district. The mission would be announced tentatively tomorrow in the second half of the day.

In the course of the following day we once again checked the readiness of the 108th Motorized Rifle Division to march. An order to replace the division commander came in at a totally inopportune moment. I suggested to General Yu. P. Maksimov that General K. A. Kuzmin should lead the division into the area assigned to it, and then transfer it to the new commander—Colonel V. I. Mironov—after that. Yuriy Pavlovich agreed with me.

In the second half of 24 December General of the Army V. I. Varennikov (who was the Chief of the Main Operational Directorate of the General Staff at that time) telephoned to say that the Chief of the Operational Administration of the Afghan Army would arrive in Termez today with a group of officers. The purpose of his trip was to carry out joint reconnaissance in order to determine the stationing areas of the Soviet forces in Afghanistan more precisely. The Commander of the 40th Army was ordered to meet the delegation and

conduct negotiations with it. There was no recommendation for me to meet with it. Why all of this secrecy, I didn't know.

The arrival of the Afghan military delegation inspired the confidence that agreement had been reached on introduction of our forces into Afghanistan. I knew Lieutenant-General Babadzhani, chief of the Operational Administration of the Afghan Army's General Staff, from previous meetings. He assumed this post upon going over to the side of the revolution. He had difficulty in handling his duties, and he displayed no business qualities. He behaved very cautiously. He agreed unquestioningly with all recommendations of our advisors, but he took no steps to carry them out, finding excuses one out over every ten times.

Consequently Babadzhani's visit was certainly not on his own initiative. He would have come only with the permission of Chief of General Staff Major Yaqubi, who was wholly devoted to Amin.

This was the situation that persuaded me that agreement on introducing—let me emphasize introducing—our force into Afghanistan had been reached between the governments of both countries.

At 0200 on 25 December I reported to Marshal of the Soviet Union N. V. Ogarkov by high-frequency telephone:

"The 108th Motorized Rifle Division is ready to march. We are awaiting receipt of the mission and the time to move out. Please consider that we will require 6-7 hours to deploy a bridge. We have worked out all of the details with the Afghan Army delegation."

"A directive is now being drafted, and after it is signed by Defense Minister D. F. Ustinov it will be sent to the district," reported N. V. Ogarkov. "To set you in the right direction, let me give you a brief synopsis of it. The internal political situation in Afghanistan is complex, and it is getting worse. At the request of the country's government our forces are being introduced into Afghanistan in order to stabilize the situation, to free the Afghan Army from protective functions, and to switch it over to fighting the counterrevolution."

"The force grouping to be introduced includes the 40th Army (the 108th and 5th motorized rifle divisions, the 860th Separate Motorized Rifle Regiment, the 56th Separate Airborne Assault Brigade, the 353d army artillery and 2d surface-to-air missile brigades; the 103d Airborne Division and the 345th Separate Airborne Regiment; the 34th Combined Air Corps). In addition the 201st Motorized-rifle Division from the Central Asian Military District will be advanced to the Kabul sector, and the 68th Motorized-rifle Division from the Turkestan Military District will be advanced as reserved to the Kushka sector after mobilization. (Soon after introduction, the army artillery and surface-to-air missile brigades and the separate missile battalions of the two motorized rifle divisions were withdrawn from Afghanistan.)

"Concurrently with the start of the advance of the 108th Motorized Rifle Division, the following will land at these airfields: Bagram—the 3d Battalion of the 345th Airborne Regiment; Kabul—the 103d Airborne Division under the command of Major-General I. Ryabchenko. Aviation will remain in place for the moment."

The Army Commander and the Division Commander were immediately informed of this, which made it possible to finish loading all of the gear into motor transport without haste, to once again clarify the march computations and the route of travel, to assign the missions to all the personnel, to clarify the goals of our introduction, and to form up the columns of march ahead of time.

On the morning of 25 December I telephoned N. V. Ogarkov to report that we were set to cross the state border at 1500 Moscow time (1700 local).

Army Commander Yu. V. Tukharinov was conducting reconnaissance together with the Afghan delegation at this time. I was at the District Commander's office when he turned to me and reported.

"As soon as we landed in Kunduz we went to see Abdullah Amin, the older brother of the Head of State, who was responsible for the northern provinces of Afghanistan. He was sitting at his desk when we entered. He didn't rise to his feet, and he didn't even greet us. He gestured for us to sit down on the couch. The discussion concerned the disposition of our forces. He had been informed of their proposed introduction into Afghanistan and their stationing in the country's north. Abdullah named several places which I had found to be unsuitable during my inspection. I would like you, Comrade Commander, to allow us to set up our camp after first coordinating this matter with local authorities."

After some thought, Yu. P. Maksimov gave such permission.

At the scheduled time the forward detachment of the 108th Motorized Rifle Division and the forward echelon of the 103d Airborne Division crossed the state border into Afghanistan on land and in the air.

Throughout the entire night of 25-26 December 1979 we monitored the advance of the division. In the morning of 26 December Colonel B. Ya. Rogontsev, who was traveling together with the division staff, reported that two regiments had reached their designated areas 1.5-2 hours ahead of schedule. The march was proceeding normally. Many of the inhabitants came out to greet our columns. When they halted, men and boys came up to the vehicles, displaying a certain amount of interest and friendship. Yes, that's the way it was. The fact that the situation changed later on is another matter. But at the time of introduction of our forces a certain faction of the people displayed goodwill and cordiality. Colonel Rogontsev then reported that the highway shown on the map was nonexistent in the Tash Kurghan-Kunduz section. Its construction had not yet begun, and in its place was a

continuous stretch of dunes. Consequently, the units that were to be located in the city of Kunduz took a detour 120-150 kilometers long.

After reporting the situation to Moscow I left for the airfield, where I met S. L. Sokolov, who had flown in from the capital. He said that the introduction of our forces was the subject of much debate in the leadership of the Ministry of Defense. There were opinions both pro and con. When the final decision was made, leadership of this operation was assigned to Sokolov.

On the following day the situation in Kabul changed dramatically. The so-called "second phase" of the April revolution began, marked by assassination of the former Chief of State Amin, Babrak Karmal became the Head of State, the Prime Minister, the General Secretary of the PDPA [People's Democratic Party of Afghanistan] and the Supreme Commander-in-Chief.

In order to stabilize the situation in the capital the 108th Motorized-rifle Division entered it at 1930, while the 5th Motorized-rifle Division was given the mission of crossing the state border at 0100 on 28 December 1978 and moving in the direction of Kushka, Herat and Shindand.

The second day's march was much more difficult than the first. This was explained not only by the presence of Salang mountain pass on the route, but also by the absence of maps among platoon commanders. A road section of around 100 km over the pass was especially dangerous. The road iced over at night. Wheeled equipment skidded on the upgrade, while tracked vehicles slid on the downgrade.

Ventilation in the tunnel was designed to accommodate one vehicle at a time, but these were continuous columns of armored equipment with diesel engines. Because of the high density of fumes the drivers had to put on gas masks; even so, the division was able to enter Kabul on schedule.

The operational group of the staff of the 40th Army assumed full control over the two divisions and the two units that entered Afghanistan. As for the "second phase" of the revolution was, and what its content and direction were, no one could give an answer. The mass media quickly seized upon this terminology and blared it out without revealing its essence. Then they soon stopped talking and writing about the "second phase" of the April revolution as suddenly as they started.

After the 108th and 5th motorized-rifle divisions were dispatched and control over them and other units that had entered Afghanistan was transferred to the operational group of the 40th Army, our group concentrated its efforts on combat coordination of the 201st and 68th motorized-rifle divisions, which finished mobilizing and drew up to the state border.

On 4 January 1980 our group, which consisted of 18 persons headed by Marshal S. L. Sokolov, flew into

Kabul. We were met by a real Russian winter—bright sun, a great deal of snow, and 15-20 degrees of frost.

We were met at the airfield by the new ambassador F. A. Tabeyev, Afghan Defense Minister Lieutenant Colonel Mohammad Rafi, Member of the Presidium of the Revolutionary Council Abdul Kadyr, the new Chief Military Advisor Lieutenant-General S. K. Magometov and other officials.

We drove straight from the airfield to the embassy. F. A. Tabeyev, formerly the First Secretary of an oblast committee in the Tatar ASSR, had just recently arrived in Afghanistan, and therefore he was not fully informed on the situation, but he estimated it to be complex and acute. The Ambassador noted that the country's new leadership was in a developmental stage, and that it required aid, although attempts were already being made to infringe upon the rights of PDPA members of the Khalk faction. This announcement caught our attention. Could it be that the reverse process was about to begin, in which the Parcham faction, which was now in power, would enjoy a privileged position while persecution of the Khalk faction would begin.

All statements by the ambassador, and especially his conclusions, were categorical in nature. It felt as if a person who had become accustomed to ruling was talking. Prior to his appointment as ambassador, Tabeyev enjoyed the reputation of a highly placed career party worker, possessing enormous power in the republic and having grown accustomed to unquestioning fulfillment of his directives. He was internally convinced that he would handle his new duties successfully.

In short, in Afghanistan Tabeyev continued to feel himself to be more an oblast committee secretary than an ambassador.

On that same day S. L. Sokolov, the Ambassador and I were received by B. Karmal. He met us very warmly.

Approaching S. L. Sokolov, he inquired after his health, expressed pleasure in our arrival, and invited all to sit down. He was extremely gracious in his manners, but a certain cautiousness could be sensed. The discussion was general—I would even say introductory.

B. Karmal talked basically about the difficulties he encountered upon assuming the post of head of state, and about the kind of aid that would be desirable from our country. It was evident from everything that the new head of state had not yet acquired confidence, and was only starting to familiarize himself with the numerous duties imposed upon him.

Sergey Leonidovich—a heaven-sent diplomat—steered the discussion very competently, directing it into the needed channel. He emphasized several times that our forces had been introduced into Afghanistan to provide moral support to the country's leadership and to exert a psychological influence upon antigovernment forces. The troops could take the most important state facilities

under their protection, and free the Afghan Army to fight the rebels and to strengthen national rule. If necessary they were ready to provide assistance to Afghan subunits and units in personnel training and in preparation for combat activities. As far as concerned supplying arms, combat equipment and military property to the Afghan Army, this issue had to be resolved at the government level.

In the evening we talked with generals and officers from the Administration of the Chief Military Advisor. Information received from them indicated that the new leadership of the Democratic Republic of Afghanistan had in principle been recognized by the officer corps of the Afghan Army, even though it wasn't in control of the situation in the country yet. After introduction of our troops, counterrevolutionary forces became more active in a number of regions, and especially in the country's northeast. Cases of attacks upon lone vehicles of ours had already occurred, and the first injuries and deaths appeared. Antigovernment demonstrations were conducted in Qandahar. Many corps, division, brigade and regiment commanders who were members of the Khalk faction of the PDPA were replaced by officers from the Parcham faction. This act evoked discontent among officers from the Khalk faction, because it made them uncertain about the future; hence their inertia and indifference toward their official duties.

Various panicky rumors began spreading widely through the army, and many believed them, because no official denials followed in the forces. The morale of the personnel declined significantly, and educational work was put on hold.

The information was not reassuring. S. L. Sokolov emphasized that advisors with the troops were essentially working under combat conditions. This required great courage on their part. It is a great credit to them that they prevented conflicts between Afghan and Soviet forces upon introduction of the latter into the country.

At the end of his statement Sergey Leonidovich noted:

"I would like to turn special attention to the impermissibility of drawing Soviet forces into the armed conflict with the rebels, and that their functions are to be entirely different, as I already said."

In the morning of the following day we met with the Defense Minister of Afghanistan. Lieutenant Colonel Mohammad Rafi had about him the look of independence and, at the same time, modesty.

S. L. Sokolov informed him of the work we had done, and of the plans for this next two days; he also offered an estimate of the state of affairs in the army, and expressed his hope that it would improve.

It must be said that in terms of the experience of his previous work and his level of military knowledge, M. Rafi was not ready for his position as defense minister. Moreover, his personality didn't stand out in the officer

milieu. He was unknown, and it was difficult for him to count on the support of the officer corps. But to be fair, Rafi did not overestimate his strengths, and he did not build any illusions. Even so, he was unable to master his new responsibilities, and at the end of the year he was relieved from his position under the pretense of sending him to a Soviet military academy for training.

During our meeting the minister said little—he did more listening than talking—and in conclusion he said:

"The Soviet Army's experience is a model for us of how we need to defend our motherland. Without your assistance it would be difficult for us to accomplish this task in short order. I am laying high hopes on Soviet military advisors. They are very conscientious, and we value their work highly. Please give me whatever help you can in mastering these new responsibilities of mine as quickly as possible. We will accept all of your recommendations gratefully."

Immediately after this meeting we flew to Qandahar, and on the following day to Bagram. Herat and Shindand, where we spent some time with three Afghan infantry divisions and with units of the 5th Motorized-rifle Division under the command of General Yu. V. Shatalin.

What we saw was not pleasant. For practical purposes the Afghan divisions did not exist as a single whole.

Subunits were significant distances apart from one another, and they lacked communication not only among themselves but also with the staffs of their units.

The local government authorities didn't look any better. Having no contact with the provincial centers and the capital, they were left to their own devices. Telephone communication was disrupted by rebels throughout almost the entire country. The population received information on the situation in the republic from the mouths of the clergy, who were mostly opposed to the revolutionary transformations.

A visit to the Afghan 20th Infantry Division in Bagram left an especially depressing impression. The 4th Artillery Regiment, an infantry battalion of the 10th Infantry Regiment, and two battalions of the 31st Infantry Regiment had gone over to the rebels as a sign of protest against introduction of our forces. Only 60 officers out of 130 and around 100 of 1,300 enlisted men were left in the 31st Infantry Regiment. Only the 24th Infantry Regiment, located in Faizabad 200-250 km away from the division headquarters, was still combat worthy.

It was our conclusion that the division had ceased to exist as a fighting unit.

I had occasion to visit these garrisons during my first visit to Afghanistan. Comparing the situation of 2-3 months ago with the present, I noted a dramatic worsening. The officers were in confusion. One of the causes of low morale was universal replacement of senior commanders by oft-unprepared personnel who were loyal to B. Karmal. The apathy and inertia that spread among the

personnel were intensified even more by all kinds of panicky rumors. It was obvious that action had to be taken not only against the rebels but also chiefly against the army's demoralization.

Of course the situation could not but cause concern in S. L. Sokolov, and he felt it necessary to share his ideas once again with Defense Minister M. Rafi. The meeting was held immediately upon our group's return to Kabul. Sergey Leonidovich acquainted the minister with his estimate of army affairs, after which he said:

"The current situation in the army needn't be considered to be hopeless. The state has sufficient strength to oppose the rebels. In my opinion the main task of the ministry today is to reinforce order and organization in the army, and ensure unquestioning support of the country's new leadership by it.

"We feel that the time has come to activate the armed struggle of the army against the rebels. After all, they won't be able to put down the counterrevolution by sitting in their garrisons."

"Comrade Marshal," M. Rafi turned to S. L. Sokolov, "I would like to take advantage of your graciousness and ask you to allocate a few forces from the Soviet troops to fight off rebels from the 20th Infantry Division's artillery depots together with Afghan subunits. They are located in the population center of Narin, where an artillery regiment that had gone over to the enemy's side is deployed."

"We'll help you," replied S. L. Sokolov, "we'll assign one or two Soviet subunits to joint actions. But I feel that the return of the artillery depots is only part of the mission. After all, not all subunits of the artillery regiment went over to the rebels. We need to restore its combat worthiness by relying upon subunits that have remained faithful to the revolution. In addition, you will probably need to provide assistance in restoring local bodies of government. By the way, the subsequent situation in the country may require joint actions of us in a number of cases. We need to prepare for this. It would be right for us to take joint steps right now to establish friendly relations between the personnel of our armies."

We subsequently met on several occasions with the Afghan Minister of Defense to resolve the most diverse issues, and in each instance there was full understanding of the existing problems on his part.

(To be continued)

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Offensive on Defending Enemy From Direct Contact

94UM0176A Moscow VOYENNY VESTNIK in Russian
No 9, Sep 93 (signed to press 20 Aug 93) pp 30-35

[Article by Candidate of Military Sciences, Lecturer, Colonel N. Yants and Major P. Dulnev: "From Direct Contact"]

[Text] It is important for a commander who is organizing an offensive against a defending enemy from direct contact with him to skillfully select the staging area, conduct the required redeployment, create the combat formation and precisely plan the battle. That is what is discussed in the following article.

Quantitative and qualitative changes in weapons, and also views on the nature of a modern combined arms battle, require a more rational selection of the methods to transition to the offensive. An offensive under conditions of direct contact with the enemy from the position of the defense will be most typical for subunits at the beginning of a war.

Redeployment of the battalion is conducted to concentrate the main personnel and equipment on the axis of the offensive and the occupation by subunits of a staging area in the designated areas. It must be simple in concept and be carried out in short periods of time with accomplishment of measures to deceive the enemy, as a rule, at night with strict observance of the mode of activity of the defending subunits. In this case, the battalion occupies a staging area [iskhodnyy rayon] and the company—a jumping-off position [iskhodnaya pozitsiya]. Furthermore, a tank battalion can occupy an assembly area [vyzhidatel'naya pozitsiya].

First echelon motorized-rifle platoons and companies are located in the first trench and their armored personnel vehicles [BMP's] (armored transport vehicles [BTR's]) at fire positions alongside their subunits or 50 meters behind them. When it is impossible for armored personnel vehicles (armored transport vehicles) to reach the leading edge without being detected, they can be located jointly with the coordinating tank subunit at its attack or assembly area.

The company's command-observation post is prepared at a distance of 200 meters from the attack position and the battalion's command-observation post—at a distance of up to 300 meters behind the first echelon companies. The grenade launcher platoon occupies fire positions at that same depth and the antitank subunit—at a distance of up to 100 meters.

A staging area is assigned to the battalion with the calculation of ensuring the concealed disposition of subunits, their least possible vulnerability from all types of weapons, and favorable conditions to transition to the offensive. A staging area is assigned to a first echelon motorized-rifle battalion in the axis of its impending

offensive within the first position and, to a second echelon battalion—normally within the second position.

A motorized-rifle company's attack position consists of a trench, the connecting trenches adjacent to it, and the fire positions of BMP's (BTR's) and other weapons that are attached to the company. In the process, a first echelon motorized-rifle company is normally located in the first trench and the battalion's second echelon company (reserve) occupies an attack position in the second and third trenches. It is advisable to leave in place the subunits that were in the battalion's second echelon within the assigned action area from which they advance to the final coordination line.

Tank subunits' attack positions can be designated at a distance of 2-4 km from the leading edge of the enemy defense under conditions that ensure their concealment from visual surveillance and communications intercept. Otherwise, they are located at the assembly area (5-7 km). That distance (with the skillful utilization of terrain) caused the least vulnerability of tanks from all types of enemy weapons.

The mortar (artillery) battery's fire position is usually selected at that distance in order to ensure maximum utilization of its fire capabilities. It can be up to 500 meters from the first echelon companies' rear boundary.

A battalion that is occupying the defense in direct contact with the enemy conducts a concealed redeployment. The battalion commander defines its sequence and time periods in his orders.

A battalion commander issued the following order for occupying a staging area for an offensive at a Northwestern Group of Forces exercise (see the diagram).

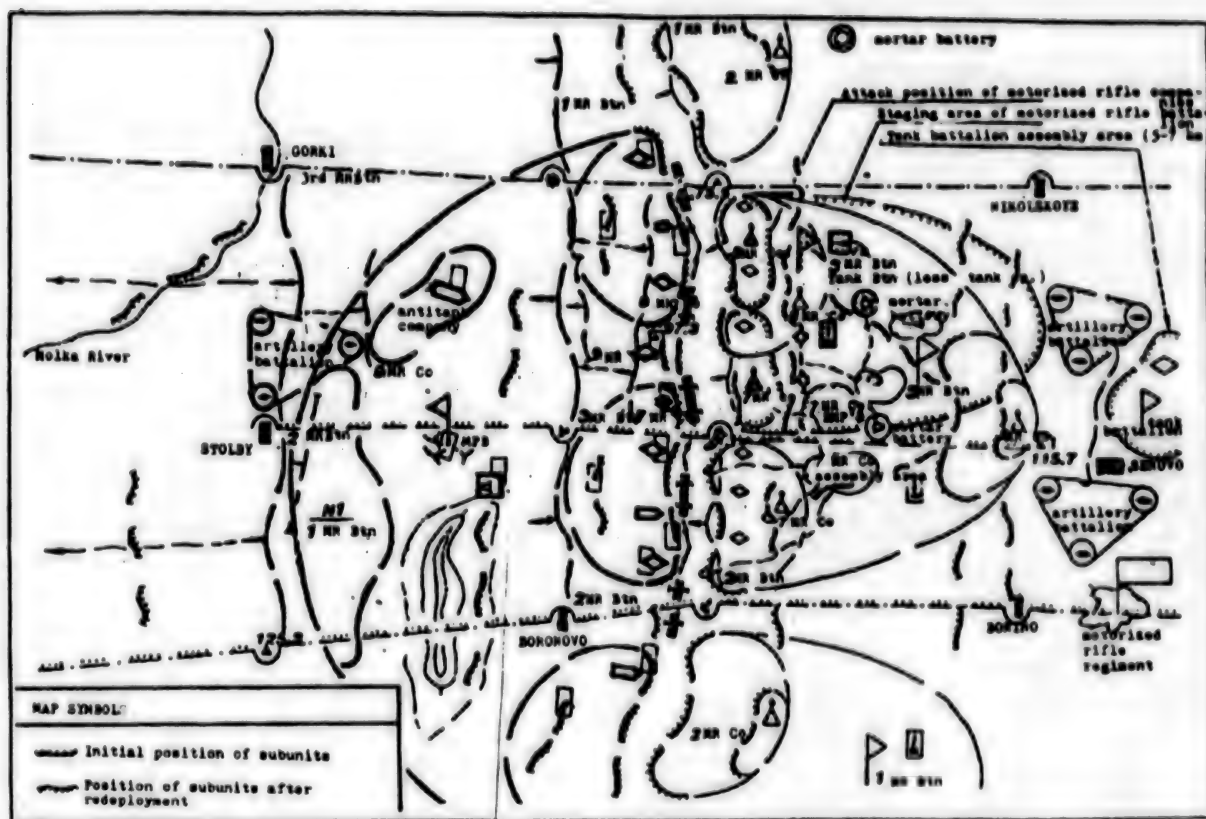
"The mortar battery and the grenade launcher platoon should occupy the fire positions indicated from 21:00 to 23:00 on 15.03. At the same time, the antitank platoon should deploy at the line of fire positions behind the second trench in the gap between 7th and 8th motorized-rifle companies.

"7th and 8th motorized-rifle companies occupy the staging area at 23:00 on 15.03. Armored personnel vehicles occupy fire positions behind their subunits. Driver-mechanics, gunners and deputy platoon commanders remain in their BMP's. The remaining personnel complete the engineering works of the staging area.

"Until the initiation of the attack, 9th motorized-rifle company remains in the previous defensive position and advances on its axis after 7th motorized-rifle company seizes the defensive position at hill 97.3.

"During the redeployment, the tank battalion (less a tank company) is concentrated at the assembly area northwest of Serovo. Advance to the final coordination line during the period from "Ch"—0.22 to "Ch"—0.04.

"The 1st tank platoon remains at the positions occupied and accomplishes fire missions through direct fire during



the period of preparation fire for the assault. With the 2nd motorized rifle battalion's transition to the attack, the platoon occupies its place in the 7th motorized-rifle company's combat formation.

Conclude occupying the staging area by 04:00 on 15.04."

On the night prior to the offensive, the motorized-rifle companies arrive at the attack positions. Guns and other weapons that have been assigned to conduct direct fire, occupy prepared fire positions. They are located in prepared shelters and advance to conduct fire against assigned targets with the initiation of preparatory fire for the assault.

At the attack position, subunits are at readiness to repel a possible enemy offensive and observe the prescribed conduct regime both on the forward edge and in the depth.

The battalion commander's work procedures to organize the offensive will depend on the content of the mission received, the nature of the probable enemy's operations, the availability of time and other factors. With the occupation of the attack position, the battalion commander organizes surveillance and security, assigns the missions of repelling a possible enemy attack and also strikes of enemy aviation and airmobile teams to the companies and weapons, issues orders for additional

engineer preparation of positions and lines, while devoting special attention to painstaking camouflage and accomplishment of measures for protection of subunits from precision-guided weapons.

During an offensive from a position of direct contact with the enemy, the battalion commander conducts a large portion of the work for the organization of the battle in the field (making decisions, the commander's reconnaissance, assignment of combat missions, organization of coordination, and effective engagement of the enemy). In the process, special attention is devoted to the commander's reconnaissance—a distinctive type of reconnaissance of the enemy and terrain at the attack position.

At the previously mentioned exercise, the battalion commander began it from a topographical and tactical orientation after which he reported the latest data on the enemy to those assembled. In the process, while utilizing terrain features (orientation points), he precisely defined the trace of the forward edge of the enemy defense, the disposition of enemy defensive positions and weapons, especially antitank weapons—ATGM's, guns, dug-in tanks, and BMP's, and indicated which targets are being destroyed by the senior commander.

The terrain and enemy defense were most painstakingly studied in the depth of the immediate objective. The

battalion commander directed the attention of his subordinates to the presence and nature of obstructions and obstacles, hidden accesses, open flanks and gaps that must be exploited during the transition to the attack.

At the commander's reconnaissance, he indicated on which front the battalion is advancing, the first echelon companies, their attack positions and combat missions and the axis of concentration of the primary efforts. Officers inscribed on working maps the revealed weapons, surveillance posts and other enemy targets that were subjected to destruction by artillery fire and also guns and tanks assigned for direct fire, ATGM's and grenade launchers.

In the field, the battalion commander indicated the positions of organic and attached weapons, the locations of passages in obstacles, locations for tanks to pass through, the procedures for marking them, time for breaching obstacles and their installation. The leader of the exercise who was present at the commander's reconnaissance on the whole approved this procedure of its conduct.

Precise assignment of combat missions to subunits is an important task in the commander's work for organizing the battle. They are disseminated to commanders in oral form through the field order or field instruction, as a rule, immediately after the commander's reconnaissance. Only that information is disseminated that subordinates really need to clarify the mission, assess the situation, make decisions, organize coordination and prepare subunits for battle.

Under current conditions, especially high demands are made on the organization of coordination while preparing an offensive. The task of the commander and staff consists of precisely coordinating the combat efforts of a large number of personnel and equipment. It is important that the orders for coordination did not duplicate the field order but developed the issued instructions and made them more specific.

The experience of the examined exercise attests that the most effective method of organizing coordination is when the commander not only issues the required orders but also listens to the reports of commanders of subordinate and attached subunits on operating procedures with a subsequent run-through of the most probable events of the impending battle.

After issuing the field order, the battalion commander reported the goal and work procedures to the officers and determined which questions there were on the organization of coordination and how he should resolve them. Then, the operations of subunits during the redeployment were coordinated in detail: Procedures were established for companies (platoons) to occupy attack positions for the offensive (2nd motorized-rifle battalion commander's orders were cited above).

By running-through the tactical events, the officer persistently strived for everyone to precisely master the procedures for destruction of enemy weapons and personnel at defensive positions during the period of preparation fire for the assault. He played out urgent situations in the event the enemy conducted counter preparation. The operations of tank crewmen with artillery and combat helicopters on the procedures for conducting fire during the transition to the attack and with motorized-riflemen when tanks were passing through the attack position were especially painstakingly coordinated.

The following were attained as a result of the battalion commander's orders, a run-through of the tactical events, and the reports of subordinates: A common understanding of the missions and the techniques to accomplish them; painstaking coordination of effective engagement of the enemy (by aviation, artillery, our own weapons and neighbors' weapons) against targets, facilities, axes, lines and time. The appropriate adjustments were made to the operations of the antiaircraft subunit for the cover of the battalion from enemy air strikes and issues of flight safety of friendly aircraft during flyovers in the fire zone, and measures were clarified for the comprehensive support of the battle of battalion subunits and communications between them.

After the dissemination of missions, planning of the offensive battle and organization of coordination, the primary goal of the battalion commander, his deputies and the battalion staff—is practical work in subordinate subunits. It is carried out by verifying locally the precise accomplishment of the issued field order, company commanders' knowledge of the opposing enemy, and also their understanding of their missions. Assistance was rendered in supplying them with everything necessary, detected discrepancies were eliminated on the spot and questions that arose were resolved as a result of monitoring the timeliness and quality of the accomplishment of measures to prepare for battle.

Great significance was assigned to the preparation of the staging area. It was equipped in an engineering sense while considering the redistribution of the battalion's combat formation after redeployment and also ensuring reliable protection of subunits from enemy precision-guided weapons.

An instructive example of the conduct of such measures—is the engineer preparation of the staging area for an offensive of 54th Rifle Division subunits in the East Prussian Operation (January 1945). The position they occupied was prepared with three trenches that were connected by a thick network of passageways. One more trench, which was 120-150 meters from the first, was dug to close with the enemy. Work to remove friendly minefields was carried out during the five days prior to the offensive. Preparation of passageways in enemy obstacles and minefields was conducted during the night prior to the offensive through the efforts of combat engineer squads and 4-5 automatic riflemen were assigned to cover each of them.

With the initiation of preparation fire for the assault, subunits that are in direct contact with the enemy use their weapons to destroy and suppress enemy weapons and personnel in defensive positions in the first position. While observing the results of the fire, the battalion commander assigns missions to the weapons to destroy the survivors and newly detected enemy targets and monitors the timeliness of the preparation of passage-ways in minefields.

During the course of preparation fire for the assault, tank subunits advance and deploy in combat formation for the transition to the attack. Armored personnel vehicles advance behind them. During the attack, when tanks approach, motorized-rifle subunit soldiers on foot prepare for it, based upon the commanders' order, and dart out of their trenches (foxholes) and, following the tanks, attack the enemy after the tanks have passed the attack positions. During an attack in armored personnel vehicles (armored transport vehicles), motorized-rifle subunits disembark personnel in armored personnel vehicles (armored transport vehicles) during the preparation fire for the assault.

The seizure of enemy defensive positions in the first position and exploitation of the offensive into the depth is conducted in accordance with the provisions of the Field Manual and depending on the developing situation.

In conclusion, let us stress that the redeployment of subunits during an offensive from a position of direct contact with the enemy is a multi-stage, strictly regulated task and only comprehensively trained commanders are capable of successfully carrying it out.

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Commentary on European Security Issues

PM1701163594 Moscow KRASNAYA ZVEZDA in Russian
15 Jan 94 p 2

[Aleksandr Golts article under the "Topic of the Week" rubric: "Security Becoming a Topic of Speculation"]

[Text] It seems that international and domestic events alike had conspired to take a back seat during the sleepy holiday period at the beginning of the year, only to burst forth uncontrollably last week. It was then that the new parliament began work and the Russian Government was reorganized. There was also the NATO Council session in Brussels whose decisions directly affect Russia. As well, of course, as the U.S. President's visit, which not only comprised talks with Boris Yeltsin but also the more or less sensational tripartite meeting involving Leonid Kravchuk.

I have no doubt that the opening of the Federal Assembly has the greatest significance for the country. At the same time I do not think that what is presently taking place in both chambers really submits itself to analysis. At the moment, whichever way you look at it, we have

the same confusion and struggle as before, but not so much between political policies as personal ambitions.

At the same time, the week's events point to one fairly alarming and completely developed trend in international relations. What is more, it appeared in the midst of events which, paradoxically, were for the most part fairly positive. What I mean is the approval in Brussels of the U.S. "Partnership for Peace" project; as well as the signing in Moscow of the tripartite documents, which, in the opinion of one high-ranking Russian diplomat, should finally draw a line under the question of the fate of nuclear weapons on Ukrainian territory.

NATO has indeed proposed an extremely wise solution to the problems of the security of East European states. Of those states which demanded their immediate admission to the North Atlantic bloc, attributing this demand to the growing threat from Russia which, they claim, might emerge as an imperial force. But several statements by leaders of East European countries give reason for caution by dint of their hysterical fervor and the fact that they are clearly out of touch with the situation as it is. I must remind you that the Polish President stated that a refusal by the West to produce a clear plan and schedule for his country's admission to the North Atlantic bloc would be a "great tragedy" which may give rise to a "second Yugoslavia" in Europe. All this leads to the conclusion that there are considerations behind these attempts to force their way into NATO which bear no direct relation to problems of security.

In my view a strange kind of inferiority complex can be seen here. After the Warsaw Treaty and CEMA ceased to exist, the East European states "cast off their Soviet chains" and discovered to their surprise that they were of no great interest to the outside world as partners. They have ended up on the sidelines of the main European and global processes. For example, no room was found for them in the "single Europe" which for the moment remains restricted to West Europe. The countries of the European Union, in creating a single economic area, are painstakingly surrounding it with a barrier of taxes, tariffs, and other restrictions. They certainly do not intend to allow any outsiders in. Other economically developed states like, for example, the United States or Japan, are showing even less interest in cooperation. They have their own priorities.

In this situation, speculation in the problems of security has, not to mince words, presented a real opportunity to draw attention to themselves and to raise their international status. For the extremist pronouncements which can be heard in Russia at present do not, of course, improve our image, but it is, to say the least, silly to perceive them as a real threat to anybody's security. But it has emerged that, by using the bugaboo of imperial Russia and portraying themselves as potential victims, it is nevertheless possible to alarm the West. Consequently, it is possible under the pretext of a dire military and political need to first of all attempt to integrate themselves into its defense structure, and only later into its

economic structure. After all, you treat your neighbors one way but your allies in a completely different way.

Ukraine also suffers from this very complex, but it is aggravated still more by economic collapse. All talk of Russia being a threat, which Kiev used as a pretext to limit its progress toward adopting a nonnuclear status, can be explained first and foremost by an urge to win for itself economic and financial advantages which have nothing to do with Ukraine's security.

Nevertheless, those who speculated in security in order to try and enhance their status, got their share of attention from the U.S. President. When Bill Clinton held talks in Prague, he tried to persuade the East European leaders to adopt partnership for peace. Stopping over in Kiev, he tried to persuade Leonid Kravchuk to agree to give up his nuclear warheads. Is it, however, possible to consider the matter closed?

Alas, no. The real reasons for speculation in security have simply not been resolved. Indeed, the East European countries now have the opportunity to integrate themselves into NATO's structures by an evolutionary process; but by no means into West Europe's economic structures. But the capital which Ukraine has been promised in accordance with the agreement, however large it might be, will not pull it back from the economic abyss. Consequently, it is still possible that speeches about the Russian threat will be heard again.

Maybe we will not just hear speeches. After all, it is not out of the question that they may attempt to provoke Moscow in order to reinforce in some way what at the moment seem like absolutely unfounded claims of its aggressiveness. We also had an opportunity to see how this is done this week. I refer to the provocation involving the arrest of Russian generals in Latvia. I am prepared to believe that this was inspired by a local nationalist petty tyrant. However, by some strange law, violent actions which might put Russia in a bad light occur in the Baltic states precisely on the eve of or during the visits of U.S. Presidents.

Nor is it out of the question that someone in the future will attempt to go along the well-trodden path of provocation. This is dangerous. Because, by speculating in security and playing games with military force, it is necessary to continually raise the stakes. You do not know where you will stop and whether you will indeed stop at all.

It is very likely that the attempts by individual states to turn problems of security into a means of attaining other economic and political goals may prove to be the same kind of challenge to global stability as local conflicts have already become. I think that both Russia and its Western partners should see this threat.

FOREIGN MILITARY AFFAIRS

Computerized Neural Networks: Foreign Military Applications

94UM0179A Moscow VOYENNY VESTNIK in Russian No 9, Sep 93 (signed to press 20 Aug 93) pp 85-88

[Article based on foreign press materials by Colonel V. Georgiyevich: "Computers and Neurocomputers in Artillery"]

[Text]

Creation of neurocomputers "is only a small part of Pentagon efforts to turn 'intelligent' weapons into weapons of 'genius'." *From an ABC television report.*

The appearance of precision weapons fundamentally changed forms of warfare and allowed U.S. specialists to speak of a genuine S&T revolution in military affairs. The new weapons required sophisticated control, guidance and navigation systems, which must function at a rate and with a precision going beyond human capabilities. Electronics, which under present conditions is represented by sophisticated computer systems and automated command and control and weapon control systems, came to man's aid. Computer technology is the material and S&T basis of these systems. In creating it, engineers always dreamed of devices which would be able to solve not only complex mathematical problems, but also diverse problems of logic to perfection and at great speed.

According to military specialists, a considerable gap presently has formed between the rapid development of missile and artillery weapons and the increased mobility and striking power of troops on the one hand and artillery fire control systems on the other.

With the appearance of third-generation computer technology in the first half of the 1960's, West German military specialists began designing automated field artillery fire control systems, which became operational in the FRG Army as the Falke automated control system. Substantial deficiencies were revealed from this system's operation at the battery-battalion level because of the low degree of automation and imperfection of equipment being used.

The FRG Ministry of Defense developed and began implementing a comprehensive program at the end of the 1970's for upgrading Army command and control and communications systems. New systems for automated control of tube artillery and MLRS combat operations also are being introduced within its framework. They include high-speed, fourth-generation digital computers and modern gear equipped with microprocessors. The main advantages of these automated control systems are a minimum reaction time of artillery subunits to new targets and increased resistance to jamming, survivability and operating reliability under combat conditions.

It is proposed to include field artillery automated control systems in the Army HEROS-1 tactical command and control, communications and intelligence system. Much attention is being given to solving the problem of interfacing with similar systems of other armies. The foreign press notes that FRG automated artillery control systems also will interwork excellently with the French ATILA, U.S. AFADTS and British BATES. In the opinion of military specialists, this will significantly simplify collection, storage and generalization of intelligence, permit supporting a broad exchange of information on friendly and enemy troops, and if necessary enable using allied weapons for delivering mass strikes against enemy groupings.

New automated systems for control of self-propelled [SP] artillery battery fire—IFAB, regimental and battalion artillery fire—ADLER, towed artillery fire—ABACUS, rocket artillery fire—ARES, artillery target location equipment—AOR, meteorological support—ATMAS and aerial reconnaissance assets are being developed within the scope of a program for gradual development (progressing over time) of the full equipment complex. We will dwell briefly on the first two.

The IFAB (Integrierte Feuerleitmittel für Artillerie Batterien) is intended for calculating settings for fire for effect and fire control of a battery of M109A36 155-mm SP howitzers. It consists of the M1136A2 mobile artillery observation post, mobile fire control post, ground target acquisition radar, and Aurora, a system for automatically laying guns on the target.

The IFAB performs tasks of reconnoitering the enemy and terrain and observing friendly troop operations; reconnoitering targets and determining their coordinates, nature, size, and degree of cover and protection; performing a topographic survey of each battery piece; receiving and transmitting data and calculating settings for fire for effect; preparing commands for commencing fire; and automatically laying guns on the target.

In addition, the **mobile observation post** observes the battlefield and results of fire, adjusts fire and provides communications with supported infantry formations. A number of requirements are placed on the mobile OP depending on the combat mission to be performed, the main ones being short reaction time to combat situation changes, determination of target coordinates with high accuracy (up to 20 m) and in no more than 20-30 seconds, continuous determination of one's position, and automatic monitoring of the electronic equipment operation.

The main electronic equipment units are an optical target survey system with built-in laser rangefinder, land navigation unit, data input/output devices, monitors, radio and intercom.

The **optical target survey system** is regarded as the most important assembly of the mobile OP. This is what supports the computing of angles of gun elevation and deflection with the help of appropriate encoders. The

periscope is coupled with a laser rangefinder controlled manually or by a knife switch.

The **land navigation unit** is intended for measuring distance covered and for continuously determining the vehicle heading using a gyroscope and current coordinates of the mobile OP location. The heading sensor is powered and its signals processed using the gyroscope's electronic circuits. The navigational computer converts incoming signals on target coordinates and performs a topographic survey.

All data necessary for this are input to the control device and light up on its display.

The **data input/output device** is a control device with indicator, keyboard and data transmission equipment. It supports compilation and storage of all fire control data in the form of coded messages in a 64-bit format.

The **monitors** consist of a control unit with display, an error light and two reflectors. The monitors automatically perform diagnosis and monitor correctness of operation of all electronic, electrical and mechanical systems. Errors and malfunctions in operation of systems as well as errors arising during data transmission are output in visual and audible form.

The **radio and intercom** consist of two transceivers for communicating with the battery and battalion, a telephone line for communicating with a forward observer, a radio for communicating with troops and an intercom for four operators.

The **mobile fire control post** includes the commander's control post and data processing post. The mobile fire control post supports artillery observers' communications with the tube artillery command post.

The **commander's control post** is accommodated in a motor vehicle in which the following are located: Data input/output devices with buffer storage having a capacity of 64 alphanumeric symbols, radio communications equipment, and a place reserved for the ADLER automated control system terminal device.

The **data processing post** is outfitted in a tracked M113CAI APC and equipped with the Falke (Falcon) TP-84 computer, dot matrix printers, data input/output devices, a teletype, communications equipment and monitoring equipment.

The computer has an internal memory size of 32,000 18-bit words and a speed up to 200,000 operations per second.

The **ground target acquisition radar** is one of the main components of the automated control system and is designed for collecting and processing intelligence on enemy ground targets.

Information comes to the mobile fire control post and is communicated to appropriate artillery subunits using all the ADLER system command and control equipment.

RATAC and RASIT radars also are included in the FRG Army set of technical reconnaissance equipment. It is planned to install these radars in aircraft, helicopters and special tethered platforms to increase their effective range.

The **Aurora autonomous automatic laying system** was developed to determine location and automatically lay guns on a target in accordance with fire control post data. Therefore the guns are outfitted with navigational equipment and a gyrocompass.

Repeated surveys are made when firing against moving targets, and the fire control post computer automatically makes corrections to commands for commencing fire.

Use of the Aurora system permits a significant reduction in the time it takes for occupying battery firing positions and for commencing fire when moving on a march, and permits a substantial improvement in fire accuracy.

Analysis of IFAB Automated Control System Functioning

In accordance with the authorized German Army organization, an artillery regiment consists of three battalions of M109A36 155-mm SP howitzers (18 guns), a composite battalion of M110A2 203-mm SP howitzers and H70 155-mm towed howitzers (36 guns), and a battalion with 16 110-mm LARS launchers, to which 240-mm MLRS launchers will be introduced additionally.

Military specialists and the Bundeswehr leadership state that each M109A36 155-mm SP howitzer is equipped with the DEA24A data input/output device for the gun commander, DA8A receiving display device for the gunner and DA12A display for the loader. Thus, a closed SP artillery fire control system is formed at the battery level which includes an artillery mobile armored OP, fire control post and gun.

It is believed that such a system acquires very great importance in connection with the planned reorganization of 6-gun batteries into 9-gun batteries. It is presumed that each gun platoon (4 and 5 guns) will have its own control post, which will allow it to operate autonomously and substantially reduce the likelihood of damage from enemy fire. It is pointed out that the reaction time until counterbattery fire commences will be reduced fourfold.

The ADLER (Artillerie-Daten-Lage und Einsatz-Rechnerverbund) system is intended for preparation of firing data for tactical employment of artillery, for communications with higher field artillery command and control entities, and for supporting interworking with the HEROS-1 tactical battle management, intelligence and communications system and with field artillery automated control systems of the U.S., British and French armies.

It has been under development under Bundeswehr order by the firm of Elektrik System Gesellschaft (ESG) since the middle of 1985.

While all IFAB, ABACUS and ARES battery fire control equipment is intended for improving accuracy and reducing time of preparing battery fire, ADLER equipment is used at the battalion-field level and must provide swift, comprehensive data evaluation and constant battlefield situation display and promptly monitor OP work using electronic data processing.

The technical level of all elements of the ADLER automated control system permits not only accelerating the performance of large-scale fire missions, but also economizing on ammunition while simultaneously increasing the number of targets engaged.

U.S. and FRG military specialists conducted field testing in June 1988 to determine the practical possibility of the ADLER automated control system interworking with the U.S. TACFIRE artillery fire control system. Prototypes of equipment, special software and a translator from one programming language to the other were used in the testing. To work out the interface of the two automated artillery fire control systems, 17 message formats, including intelligence and commence-fire orders, were transmitted between them over the communications channel.

U.S. and FRG specialists gave test results high marks and drew a very reassuring conclusion that they were an important step in providing mutual fire support of ground troops of all NATO member countries.

Full, comprehensive field testing of the ADLER command and information system were held in November 1988 and went very successfully according to Bundeswehr military specialists.

The new automated control system is to become operational with FRG Army artillery subunits in the first half of the 1990's. It is proposed to outfit all artillery command posts with it at corps-division, artillery regiment-battalion and field artillery battalion-battery levels.

The possibility of practical use of fourth-generation computers in the ADLER field artillery automated control system indicates the wide use of miniature processors in them. It is expected that the 1990's will become the years of creation of fifth-generation computers, which will considerably surpass existing models in basic characteristics, above all in power. The Iliac IV high-speed computer project being developed under a U.S. Defense Department order can serve as a typical example in this respect. Parallel operation of 256 processors with a capacity of a billion is planned in this machine. Human contact with the intelligent interface system in such computers will occur in conventional language and programming will be in logical programming language.

Fifth-generation computers open up great opportunities for enhancing all spheres of human activity connected with information processing, including solving artificial intelligence problems.

Announcements by the Japanese firm of Fujitsu about creation of equipment (a neurocomputer) based on a model of a neural network for solving artificial intelligence problems are reassuring in this respect. It operates according to the principle of a human brain and can process the same amount of data as a hundred thousand neurons. As a comparison we will note that modern supercomputers can perform operations to an extent inherent to capabilities only of six brain neurons.

Western specialists assert that neurocomputers will be used widely in five years, above all in the military area in developing automatic systems for controlling spacecraft, troops, and modern weapons. In connection with this, a broad front of joint basic research by physicists, neurobiologists, electronics specialists, and specialists in brain theory and data processing has appeared in the United

States, Japan, the FRG and other countries. All this indicates the objective reality of the appearance of a fundamentally new scientific direction whose practical realization will ensure a qualitative breakthrough in the area of developing and creating super-effective weapon systems.

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SECURITY SERVICES

Mass Desertions of Kyrgyz Border Troops

94UM0199A Moscow *LESNAYA GAZETA* in Russian
21 Jan 94 p 1

[Report]

[Text] Mass desertions have occurred in Russia's group of border troops guarding the Kyrgyz-Chinese border. Yesterday more than 200 young soldiers conscripted to serve in Kyrgyzstan abandoned their subunits.

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